POPULAR HINDU ASTRONOMY

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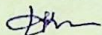
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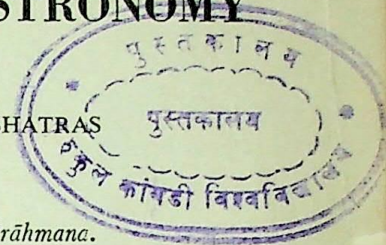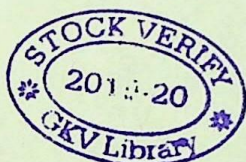
BY
KALINATH MUKHERJI

WITH A FOREWORD
BY
N. C. LAHIRI

Price : Rupees Twenty Only

DEDICATED

(With his permission)

TO

SIR M. J. HERSCHEL, BART., M.A.,

Sometime District and Sessions Judge of Nadia, Bengal

As Humble Tribute of Gratitude for his inspiring a number of Under-graduates of the Krishnagar College

WITH LOVE FOR THE STARS

BY

One of them

THE AUTHOR

FOREWORD

Astronomy and medicine are the two branches of science the development of which started with the dawn of civilization. The curiosity about the heavenly bodies and their movements prompted the ancient mankind to become star-gazers. These observers of the sky attributed some definite shapes to the different clusters resembling animals, birds and human beings, and associated many allegories and legends with them. All the countries of the world had contributed to the naming and grouping of stars, but the work of India, China and Egypt in this respect has been remembered by the subsequent generation. The ancient Rishis of India had embodied the results of sky-gazing even in the Vedas, the earliest scripture of the world now available to us.

No nation can flourish properly unless the early history of the country is fully known to the subsequent generation. Due to long alien domination, the old history of our country was submerged in oblivion, and we became accustomed to accept all the episodes and allegories in their face value. In the later half of the nineteenth century, many scholars in different parts of our country took up the study of ancient Indian subjects and as such this period may be called the renaissance period of Indian culture. They unveiled the truth that was concealed in our different old literature, including the Vedas, Upanishads, Puranas and epics. The work of studying the astronomical branches was undertaken almost simultaneously by Balagangadhar Tilak, Sankar Balakrishna Dikshit and in Bengal by Kalinath Mukherji and Jogesh Chandra Ray. The present book is the result of Mukherji's untiring efforts in studying our old scriptures with an astronomical eye.

Just as the geographer must know his globe, so the astronomer must know the names and positions of the stars and star clusters in the celestial sphere. The knowledge of the names of stars and the constellations and their mapping out is a primary necessity of all astronomers. This has now assumed great

importance in view of the present-day advancement of mankind whose astronauts are soaring deeper and deeper into space having the vast stellar sphere as their only guide.

In mapping out the celestial sphere mainly on the basis of knowledge gathered from ancient books of India, the author with his scholarship, devotion and perseverance brought out this books about 70 years ago. It is a descriptive astronomy, so to say, geography of the heavens prepared on the basis of the Hindu scriptures.

On the basis of his research the author has meticulously drawn up the map of the entire celestial sphere divided into two maps of northern and southern hemispheres. He carefully illustrated them with figures drawn by himself. These two maps detailing stars and heavenly bodies along with other maps, figures and illustrations, first appeared in his Sanskrit book '*Bhagola Chitram*' published in the year 1901. These two maps have been included in the book which gives a glimpse as to how our ancient astronomers described the celestial sphere in the study of practical astronomy.

Born in a middle class Brahmin family at Jaidia in Jessore district, now in East Pakistan, the author had college education at Krishnagar. He graduated with honours in the year 1872 with Mathematics, Philosophy and Sanskrit. He then studied Law and got the degree in 1873. While he was a student at Krishnagar College, he came in contact with Sir M. J. Herschel, M.A., Bar-at-Law and also an astronomer who was the grandson of Sir William Herschel, the great astronomer. The author had the privilege of getting considerable inspiration and guidance from Sir M. J. Herschel in the study of astronomy and the stars. As a mark of tribute and respect he dedicated the present book to his preceptor. In the year 1873 the author started practice at the bar in his home district and soon became one of the leading practitioners. He was also a Vakil of the Calcutta High Court.

Although a lawyer, astronomy was the subject of his great love and devotion. For the purpose of getting unobstructed view of the celestial sphere he constructed a house near his

village home in a wide open place away from the crowded locality and gave its name Riponpalli after the name of Lord Ripon, formerly Governor-General of India. In every week-end he used to go to Riponpalli from Jessore and engaged himself in studying the stars in the heavens from a small observatory erected for the purpose. Thus he gathered the knowledge about stars not only from books of astronomy and old texts, but also from practical observations carried out by himself.

The present book 'Popular Hindu Astronomy—Part I' was published in 1905. This part comprises six Vithis, out of the twelve Vithis in which the celestial sphere was divided by the author. Part II of the book comprising the other six Vithis was in the press, but could not be published during his life-time and the manuscripts are also not available now. He has however discussed briefly all the twelve Vithis in his '*Bhagola Chitram*' a map of the heavens which is in Sanskrit, as well as in his Bengali Book "*Tara*". The remaining six Vithis have been included in the present edition of this book taking the data given in the above two publications.

The author in his book has collected all the legends from the Vedas, Ramayana, Mahabharata, Puranas and even from later works like those of Kalidasa that have any reference to stars. He has also hunted up Zend-Avesta, the old scripture of the Parsi community as also other old books of the Western nations, and by so doing he has tried to establish a close relationship among all the early ideas. In this respect he may be regarded as a pioneer and deserve great credit which all research workers would accord to him ungrudgingly. He has paved the path of modern workers in the field in establishing a good relationship among the early nations of the world and in deciphering the inner significance of the allegories.

It is difficult to restrain oneself from putting the question as to whether all the stories associated with the stars are real historical events or they are merely mythical stories. It is no doubt true that many of these stories are fiction or myth coming down from the early period. But still there are some stories which are associated with real historical persons. For example,

we can mention the name of Agastya, the Aryan sage who is believed to have first explored South India. He started for his southern journey and finally went up to Sumatra or Java wherefrom he did not return. His kinsmen not finding him to come back, named a bright star of the southern sky after the sage.

The author has correctly brought out the fact that originally Krittika was the first nakshatra of the lunar zodiac and consequently Vrisha was the first Rasi. Unlike the present-day usage, Krittika nakshatra and Vrisha rasi were taken to start simultaneously at that early age. This assumption gives a solution to a very pertinent question of horoscope-making which baffled all research workers in the field. This is in respect of the horoscope of Sri Ramachandra as given in the Ramayana.

It has been stated that Rama was born in the Navami tithi of Chandra Chaitra when the sun was in Mesha rasi and the Moon was in Punarvasu nakshatra. Although it is not known whether it is a real horoscope of a historical person or one fabricated by later astrologers to fit in with the events of life of Ramachandra, there is a great discrepancy in the birth chart judged from the present-day principles of calendaric astronomy, as discussed below. In a navami tithi the moon must be ahead of the sun by 96 to 108 degrees. If the sun be taken to have occupied even the first degree of Mesha, then the moon must be situated between 6 and 18 degrees of Karkata rasi in order to get the navami tithi. But in this position of the moon we get the lunar nakshatra as Pushya or Aslesha and not Punarvasu which ends at 3° 20′ of Karkata. This anomaly is solved if we take for granted that in early days Krittika nakshatra started with Vrisha rasi. This gives the ending point of Punarvasu as 6° 40′ of Karkata. So if the sun is taken to be situated at the first degree of Mesha and the moon about the 6th degree of Karkata then it gives a complete solution to the anomaly.

As is naturally expected from a practical observer of the heavenly bodies, the author expressed anxiety over the deplorable condition of present-day Panchangs which give inaccurate positions of the Sun, Moon and planets. He expressed his grief

for the inefficiency of later astronomers in applying proper *Vija* corrections to the planetary positions as had been done in early years even up to the time of Ganesa Daivagna (born 1402 S. E. or 1480 A.D.). The author suggested fresh corrections to be determined and applied to the mean positions of the heavenly bodies, but he himself could not do that presumably due to his other preoccupations. The desired Vija corrections to the mean elements of the Surya-Siddhanta to obtain the correct mean elements have now been determined and are given below:

Element	Vija correction for 14 April 1967			Annual variation of Vija
Mean Sun	+ 0°	13′	26″.48	+ 8″.49
Solar Apogee	+ 1	41	03.90	+ 11.51
Mean Moon	+ 0	03	02.22	+ 8.10
Lunar Apogee	– 5	32	03.67	– 22.42
Lunar Node or Rahu	– 3	47	52.73	– 9.65
Mean Mercury	– 6	34	11.98	+ 27.25
Mean Venus	– 8	07	43.26	– 21.02
Mean Mars	+ 1	33	22.05	+ 17.85
Mean Jupiter	– 4	33	11.35	– 6.75
Mean Saturn	+ 5	52	43.27	+ 27.75

If we use the mean elements of Surya-Siddhanta corrected by the amounts of Vija derived from the above, and also use the equations of centre and Sighra equations properly corrected and brought up to date, then our Surya-Siddhanta calculations can also give the positions of planets that would agree with modern observation. But it is a pity that till this date some of our Panchang-makers are paying no heed to the modern requirement and they are still adhering to the 400-year-old Vijas.

For the purpose of distinguishing and assigning different names to the ecliptc stars through which the moon passes, attempts were made from very early time in some countries to divide the star groups into constellations. In India the ecliptic stars were divided into 28 divisions even in the Vedic times. These are known as nakshatra divisions or lunar mansions. As these clusters of stars do not cover equal lengths of the ecliptic,

the original divisions were naturally of unequal length. We get a description of this unequal division in the work of Bhaskaracharya, who has stated that it was introduced by early sages (those like Garga). In this unequal division system there are 15 nakshatras of normal length which is 13° 10′ 35″ the mean daily motion of the moon. The nakshatras Bharani, Ardra, Aslesha, Svati, Jyestha and Satabhisaj were of half the above length and the nakshatras Rohini, Punarvasu, Uttara Phalguni, Visakha, Uttara Asadha and Uttara Bhadhrapada were of one and half times the normal length, and Abhijit's length was only 4° 14′ 15″ the residue of the circle. With the introduction of computational astronomy, the above unequal division was found very inconvenient for practical calculation. As a result the ecliptic was subsequently divided into 27 equal parts and Abhijit was excluded from the list. Thus we now get 27 nakshatras or lunar mansions of 13° 20′ each starting from Asvini. It is likely that this equal division system came into vogue when the nakshatra cycle started from Krittika at the Vedic times about 2000 B.C. At the time of the Vedanga Jyotisa Calendar (1350 B.C.) when the nakshatra cycle started from Dhanistha, the equal division system was fully established. Much work remains to be done regarding this unequal division system of the nakshatra cycle which was in vogue in the earliest times.

In his Sanskrit work the '*Bhagola Chitram*' the author has drawn up charts showing the positions of nakshatras according to different authorities and he has selected the yogataras or principal stars of the nakshatra divisions taking into consideration the views expressed by these authorities.

A table is appended showing the initial points of all the nakshatra divisions both according to the equal division and unequal division systems. The equal division system is based on the present-day accepted theory of Chitrapaksha in which the star Chitra or α Virginis is taken to occupy the middle point of the cycle which is the same as the middle point of Chitra nakshatra. As regards the unequal division system, it is very difficult to say with certainty whether the divisions started from Asvini or any other nakshatra like Krittika, Magha, Chitra,

Sravana or Dhanistha. We have, however, given the initial points of the unequal division system starting from Asvini.

In the table the different yogataras along with their Chitrapaksha nirayana longitudes have also been given. These yogataras are according to the Surya-Siddhanta as identified by Burgess. In this case also it is difficult to say whether these stars as identified were known as such in the Vedic times and in the later period prior to the evolution of the Siddhantic system of astronomy in our country.

The author has introduced a new system of nomenclature in respect of the stars which closely follows the present astronomical system of naming by use of the Greek alphabet. The names of the yogataras as identified by the author have also been added in the table with the names as given by him. It has been noticed that in some cases the two identifications are not identical.

As regards the Indian names of the different stars and star groups, it is found to be a difficult task to assign appropriate names to them, although the need for such Indian names has now become paramount. The Siddhantas give the names of only a few stars mostly near the moon's path, which have, however, been adopted by the author. As regards stars of other regions, the author has taken much pains in associating them with fables from our old scriptures and assigned to them some names appropriate to our ancient history. The four maps included in this book consummate the result of his labour. One or two such maps have been published by some other authors in our country. Those who are working in the line of assigning Indian names to the different stars and constellations corresponding to the present astronomical names will find a helpful guidance from the present book. These maps and those published by other authors will be their basis for the compilation of a standard all-India star atlas with Indian names of stars and constellations.

One cannot but sincerely thank the author for the painstaking devotion and strenuous labour undertaken by him in collecting different fables and anecdotes from different Indian texts as well as those from the Middle East and Western

TABLE

Nakshatra	Initial point (Equal div.)			Initial point (Unequal div.)			Yogatara with Nirayana Long. (After Burgess)					As identified by the author	
	s	°	'	s	°	'			s	°	'		
Asvini	0	0	0	0	0	0	β	Arietis	0	10	7	1	Meshasya
Bharani	0	13	20	0	13	11	41	Arietis	0	24	21	3	Meshasya
Krittika	0	26	40	0	19	46	η	Tauri	1	6	8	20	Vrishasya
Rohini	1	10	0	1	2	56	α	Tauri	1	15	56	1	Vrishasya
Mrigasiras	1	23	20	1	22	42	λ	Orionis	1	29	51	11	Mrigasya
Ardra	2	6	40	2	5	53	α	Orionis	2	4	54	2	Mrigasya
Punarvasu	2	20	0	2	12	28	β	Geminor.	2	29	22	1	Mithunasya
Pushya	3	3	20	3	2	14	δ	Cancri	3	14	52	3	Karkatasya
Aslesha	3	16	40	3	15	25	ε	Hydrae	3	18	29	2	Hrada-Sarpasy
Magha	4	0	0	3	22	0	α	Leonis	4	5	58	1	Simhasya
P. Phalguni	4	13	20	4	5	11	δ	Leonis	4	17	27	4	Simhasya
U. Phalguni	4	26	40	4	18	21	β	Leonis	4	27	46	2	Simhasya
Hasta	5	10	0	5	8	7	δ	Corvi	5	19	36	2	Karkatasya
Chitra	5	23	20	5	21	18	α	Virginis	5	29	59	1	Kanyah
Svati	6	6	40	6	4	28	α	Bootis	6	0	23		Nishthya
Visakha	6	20	0	6	11	3	α	Libra	6	21	14	1	Tulasya
Anuradha	7	3	20	7	0	49	δ	Scorpii	7	8	43	5	Vriscikasya
Jyestha	7	16	40	7	14	0	α	Scorpii	7	15	54	1	Vriscikasya
Mula	8	0	0	7	20	35	λ	Scorpii	8	0	44	2	Vriscikasya
P. Asadha	8	13	20	8	3	46	δ	Sagittarii	8	10	43	3	Dhanusah
U. Asadha	8	26	40	8	16	56	σ	Sagittarii	8	18	32	2	Dhanusah
Abhijit		—		9	6	42	α	Lyrae	8	21	27	1	Vinayah
Sravana	9	10	0	9	10	57	α	Aquilae	9	7	55	1	Garudasya
Dhanistha	9	23	20	9	24	7	β	Delphini	9	22	29	1	Sravisthasya
Satabhisaj	10	6	40	10	7	18	λ	Aquarii	10	17	43	7	Kumbhasya
P. Bhadrapada	10	20	0	10	13	53	α	Pegasi	10	29	38	3	Pakshirajasya
U. Bhadrapada	11	3	20	10	27	4	γ	Pegasi	11	15	18	1	Dhruvamatuh
Revati	11	16	40	11	16	49	ζ	Piscium	11	26	1	6	Minasya
Asvini	12	0	0	12	0	0							

countries and establishing a reasonable link between them and their relation with stars, a work which will guide and help all those who are associated with the research work in the field.

Calcutta
20th February, 1969
(1 Phalguna, 1890 S. E.)

N. C. Lahiri

AUTHOR'S PREFACE

The chief glory of the Indo-Aryan race lies in their perfect system of the science of astronomy, the noblest and the grandest of all sciences. It is however at the same time a difficult science, as it has to deal with objects ever running at a very high rate of motion, in some cases, almost inconceivable, and not always uniform. Astronomical calculations therefore require corrections every year, every month and every day, nay every moment. These corrections are technically called vija (वीज), the want of which, for a long time, has now thrown the Hindu calendar and with it the Hindu religious ceremonies and Hindu national festivals into utter confusion. The celebrated mathematician and astronomer Ganesa (born. S.E.1402), the illustrious son of the renowned astronomer Kesava (born S.E. 1378) observes with just pride, "that the Grahas (planets) were right in their computed places in the time of Brahma, Acharya (Brihaspati), Vasishtha, Kasyapa and others by the rules they gave, but in length of time they differed. In the beginning of Kaliyuga, Parasara's (B.C. 1300) book answered, but Aryabhatta (born S.E. 398) many years afterwards, having examined the heavens found some deviations and introduced a correction of *vija*. After him when further changes were observed, Durga Singha, Mihira (born S.E. 427) and others made corrections. After them came the son of Jishnu, Brahmagupta (born S.E. 520) who made the necessary corrections. Afterwards Kesava (born S.E. 1378) fixed the positions of the planets and sixty years after Kesava, his son Ganesa (born S.E. 1402) made corrections."

It is time to make fresh corrections in our astronomical calculations for want of which the Hindu almanacs are relapsing into a state of confusion. Futile attempts are being made here and there to correct the positions of the planets ; but to do so with any degree of success, it requires actual observations of the heavens carried on by practical astronomers. Book-learning can hardly improve matters. But no observation is possible

without astronomical charts and instruments. As to the former, the uncouth and inaccurate and in some cases obscene charts of the Nakshatras found in some of the astrological works are the only ones now extant, works on the '*Nakshatra Vidyā*' being no longer in existence. We have therefore to reconstruct an atlas of the Hindu astronomy, but to do so the only course left open is to accept and adopt European charts.

As regards the nomenclature of the stars, asterisms and constellations, we can hardly expect to derive much help from the Siddhāntas, the only astronomical works that have come down to us ; because they are, as their names imply, solely concerned with the technical branch of the science. The names of a few stars of mathematical importance and the names of the twentyeight Nakshatras (asterisms or constellations as the case may be) and of the twelve Rāsis (राशि) or signs as they are called in the West, are all that we find in them. As we have said, no work on "*Nakshatra Vidyā*" or descriptive astronomy has come down to us. As for the names of the stars, asterisms and constellations other than those mentioned in the Siddhāntas, where are we to get them ? The reply is that though the Rishis of old have not left us tablets and cylinders, boundary stones and cuneiform inscriptions like the Babylonian sages, they have left for us a vast store of legends and myths in the *Sāstras*, which interpreted in their proper light, are sure to yield much valuable astronomical informations we want. And we can glean them from the narratives that abound in the Samhitās and Brāhmanas, in the Upanishads and Tantras, in the Itihāsas, and the Purānas. The ancient Hindu looked upon the Nakshatras (*a*) as the abodes of the Gods, vide :

देवगृहाः वै नक्षत्राणि । T. Br. I. 5. 2. 5.

and upon the more brilliant stars as the weapons to kill the *Asuras* (Darkness), such as *Vajra* (वज्र) the thunder, *Sula* (शूल)

(*a*) The Sk word *Nakshatra* like its Akkadian synonym *Kakkab* and its Semitic synonym *Mul*, is used to denote a star, an asterism and a constellation, as well as a planet and a meteor.

the spear and so forth. "When therefore the constellations are personified in a human figure, this figure is naturally represented as armed with some weapon." Thus most of our "Gods and Goddesses" are armed with weapons.

The earliest Hindu astronomer (we use the word in its literal sense) had in his mind certain ideas as to the attributes of his divinities before he began to locate them, each in his proper sphere in the heavens. For its all-pervading rays, the Orb of Day was allotted to *Vishnu* (विष्णु) lit., the all-pervading one ; while for her softer beauty, the silvery "Queen of Night" was allotted to *Vishnu's* consort *Lakshmi* (lit., one having dark spots). The lustrous Orb of Venus as the morning star was allotted to the great warrior *Usanā*, a phase of Indra (*a*), and the beautiful Orb of Venus as the evening star, to *Sachi* (lit., the white), and *Rati* (the Goddess of Love) ; and the fiery Orb of Ares—Mars to *Kāma*, the God of Love. The brilliant Orb of Brihaspati received *Indra*. The dark and sluggish Orb of *Sani*—Saturn (Satan) holds *Yama* the Death-God, and so on.

Pushan, the great charioteer of the Sun-God, with his goat steeds, was placed in the constellation (Auriga) situated above the Vernal Equinox (B.C. 4250) the Door of Heaven (Rv. X. 70. 5.), and *Sepha Betāla* in Cepheus and so on.

Each of the thirty Nakshatras had its patron divinity, the *Asvin* brothers, *Yama* and so on ; and the good *Yama*, the first-born and the chief of the Fathers, was placed on Draconis, the Pole-star of B.C. 3000, above the *Pitris* alias the *Saptarshis* in Ursa Major.

Legendary heroes also had their share. *Parasu-Rāma* is the Indian brother of the Gk. Perseus, and *Kumāra Skanda* is the Indian analogue of the Biotian *Kandaon* (Orion). The Southern Cross holds *Trisanku*, a king of the solar dynasty.

Our astronomical *Rishi* believed in his heart of hearts that one day he himself would pass on to one of the heavenly luminaries and that many of the "stars are the lights of religious men".

Sat. Br. VI. 5. 4. 8.

(*a*) शक्राधिदैवतं ध्यायेत् शचीं प्रत्यमिदैवतं—Grahayāgatatva

B

This grand old idea peculiar to our *Rishis* of austere piety, has filled the heavens, as is popularly believed, with *Agastya* and *Lopā-mudrā*, *Vasishtha* and *Arundhati*, *Suniti* and *Dhruva*.

It may be said without any exaggeration that our Epic poets and the *Aitihāsikas* have drawn their materials so largely from astronomical myths that one can hardly discover any trace of historical legends in their works.

We have illustrated our standpoint by a few examples to be found in our Introduction to this work (Vide. pp.7-63). To them we draw the reader's special attention. In this connection we should also remind him that matters religious do not come within the scope of the present work.

Every mountain, every river, every shrub in India, observed a great Sanskrit scholar of the West, has a story of its own to tell, and we only wish to add that every star (we use the word in a comprehensive sense) important either on account of its superior brilliancy or of its prominent position, has a story of its own to tell to the Indians. The origins of these stories are to be found in the Vedas, as we have attempted to illustrate in these pages.

We can hardly hope that our work will find an easy acceptance with the Vedic scholars. Because while we had to adopt the existing translations and paraphrases of the verses referred to in it (and we have thankfully adopted them) we could not accept the interpretations sought to be put on the verses concerned by commentators Eastern or Western. If any one will turn on a starry night from the Vedic texts to the nocturnal sky, he will see at a glance that it would be practically impossible to do so.

Our judicious readers will no doubt find that the interpretations we put on them are nothing but the logical result of the investigations started by the leaders of the modern school of Vedic interpretations with the noble object "to discover and disclose the spirit and truth of the most ancient and venerated literary records that are the heritage of Aryan man". However in this connection we must admit that our responsibility

is very great indeed, and in the words of the illustrious poet, my only hope lies in—

उत्पत्स्यतेऽस्ति मम कोऽपि समानधर्म्मा ।
कालोह्ययं निरवधिः विपुला च पृथ्वीः ।।

I cannot conclude without publicly expressing my deep obligations to Prof. Henry Stephen and to Babu Harijiban Banerjea, M.A. My special thanks are due to the former for much valuable assistance, most freely given, in supplying me with informations as to the true import of the classical names of the stars and the constellations. As regards the latter I may truly say that without his labours in preparing copies for the press and in correcting the proof sheets, this work could not see the light.

Lastly, I should add that for the purpose of illustrating by way of analogy the result of my labours and researches I have freely quoted from the Researches into the origin of the Primitive Constellations of the Greeks, Phœnicians and the Babylonians lately published by Mr. Robert Brown (J).

RIPON-PALLI,
Jessore,
in Bengal,
June 23rd, 1902.

KALINATH MUKHERJI

PUBLISHER'S NOTE

Towards the end of the nineteenth century during the renaissance period of Bengal, the author, my grandfather, devoted himself to the study of the stars with special reference to Hindu Sastras. He undertook the research work in the subject after having received inspiration and guidance from Sir M. J. Herschel, a grandson of the great astronomer Sir William Herschel, to whom he dedicated this work.

The first publication of the author's work was भगोलचित्रम्, an Atlas on Hindu Astronomy in Sanskrit and this was published in 1901. In the following year he published "*Tara*", a Bengali book on Hindu Astronomy. In 1902 he wrote the present book *Popular Hindu Astronomy*. Part I of the book was published in 1905.

In all his works the author divided the celestial sphere into twelve divisions called Vithis. Part I of the Popular Hindu Astronomy comprised six Vithis. Part II of the book which comprised other six Vithis was in the press but could not be published during his lifetime and even the manuscript could not be traced thereafter.

The author has however discussed briefly all the twelve Vithis in his Bengali book *Tara* and in भगोलचित्रम्. I desired to have the Vithis seven to twelve included in this new publication.

I have been very fortunate in getting friends who have ungrudgingly offered their help and encouragement in getting the new edition of the book. I am grateful to Sri N. C. Lahiri, M.A., Ganitacharya and Ganita Kalanidhi, who is an authority on the subject, for his authoritative foreword. My thanks are also due to Sri Arun Kumar Lahiri who translated the Vithis seven to twelve from the Bengali Book *Tara* and incorporated relevant slokas from भगोलचित्रम्. I am thankful to Rev. Father Antoine of St. Xavier's College, Sri Radhagobinda Chandra, astronomer, Sri Ananta Kumar Mitra, Advocate, Sri R. Subramaniam, Curator, Birla Planetarium for their time to time

advice, suggestions and guidance in getting this new edition in its present form.

In the end, thanks are due to Messrs. Sree Saraswaty Press Ltd. for their co-operation for bringing out this book in time.

The day on which I write this note is a memorable day for the mankind being the day of the wonderful conquest of the Moon, the greatest epoch-making event of science and glorious fulfilment of generations' dream to inscribe foot-steps on lunar surface—an achievement of Neil Armstrong and Eldwin E. Aldrin and their comrade Michael Collins—the three heroes of all time to come.

Dated : July 21, 1969
18, Deshapriya Park, West,
Calcutta-26.

NIRMAL MUKHERJEA

CONTENTS

Introduction

Tārāmandalas and Nakshatras

VITHI I

Pages

VITHI IX

VITHI X

VITHI XI

ABBREVIATIONS

A.P. = Agni Purāna
A.Br. = Aitareya Brāhmana
A.V. = Atharva Veda
B.P. = Bāmana Purāna
Bh.P. = Bhabishya Purāna
Black Yv. = Black Yajur Vedas
Br.P. = Brahmānda Purāna
Br.S. = Brahma Siddhānta
B.V.P. = Brahma Vaivarta Purāna
R. Brown = Roberr Brown's Primitive Constellations
Chh.Up. = Chhandogya Upanishad
G.P. = Garuda Purāna
K.P. = Kālikā Purāna
Kumār = Kumāra Sambhava
Kur.P. = Kurma Purāna
Mahā = Mahābhārata
M.P. = Mārkandeya Purāna
Mat.P. = Matsya Purāna
N.P. = Nārada Purāna
Nir. = Nirukta
Nir. N. = Nirukta Nighantu
P.P. = Padma Purāna
Pr.Up. = Prasna Upanishada
R.Deva. = Rādhā Kānta Deva
Raghu = Raghu-vamsa
Rām. = Rāmāyana
Rv. = Rig-Veda
Sat.Br. = Satapatha Brāhmana
Sk.P. = Skanda Purāna
Sr.Bh. = Srimat Bhāgavat
S.Yv. = Sukla Yajur Veda
S.S. = Suryya Siddhānta
T.Ar. = Taittiriya Āranyaka
T.Br. = Taittiriya Brāhmana
T.Sam. = Taittiriya Samhitā
V.P. = Vishnu Purāna
Var.P. = Varāha Purāna
V.D.P. = Vrihat Devi Purāna
V.N.P. = Vrihat Nāradiya Purāna
V.S.S. = Vrihat Sāma Samhitā
Yv. = Yajur Veda

INTRODUCTION

DEFINITIONS

TARA (तारा) OR STAR

A star is an isolated speck or point of light in the firmament. The term includes the sun and the *Graha-Panchaka* (ग्रहपञ्चक) *i.e.*, "Planets-five" commonly called the *Tārāgrahas* (ताराग्रह). In India stars of astronomical importance received special names derived from the myths connected with them and in few cases special names denoting their positions in heaven or in constellation.

The star names Prajāpati (प्रजापति), Agni (अग्नि), Lubdhaka (लुब्धक), and Agastya (अगस्त्य) are connected with national myths, while "Dhruva" (ध्रुव = शङ्कु) *i.e.*, a peg denotes the position of the star in the heavens and "Brahma-hridaya" (ब्रह्महृदय) the position of the star in the constellation in which it is situated.

In the west also this method prevailed in early days. In 1603, this cumbersome method was superseded by the elegant invention of Bayer, a German Astronomer. This invention consisted in calling the stars in each constellation after some letter in the Greek Alphabet,* the sequence of the letters

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* The Greek Alphabet—

α Alpha.
β Beta.
γ Gamma.
δ Delta.
ε Epsilon.
ζ Zeta.
η Eta.
θ Theta.
ι Iota.
κ Kappa.
λ Lambda.
μ Mu.
ν Nu.
ξ Xi.
ο Omicron.
π Pi.
ρ Rho.
σ Sigma.
τ Tau.
υ Upsilon.
φ Phi.
χ Chi.
ψ Psi.
ω Omega.

depending on the positions of the stars in the constellation-figure, or in the order of their magnitudes, in each constellation.

Thus the largest star in the constellation Aries (Mesha = मेष) is called "α Arietis" meaning "α of Aries".

The star next in magnitude is called β Arietis and so forth. We have to follow this method in the absence of any of our own, but in the place of the Greek letters unfamiliar to us, we propose to substitute numerals 1, 2, 3, &c.

Thus α Arietis = 1 Meshasya,
β Arietis = 2 Meshasya
and so forth.

But as we have tried, as far as possible, to follow the order of magnitudes more closely, there has been disagreement in many instances.

2. STHULATVA (स्थूलत्व) OR MAGNITUDE

The largest and brightest stars are said to be stars of the first magnitude. Next come stars of the second magnitude and so on by a descending scale.

3. BHAGOLA (भगोल) OR THE SIDEREAL SPHERE

The inner surface of the hollow celestial sphere is called the Bhagola, literally the star-sphere.

4. KHAGOLA (खगोल)

The term literally means the round Sky. It means the space within the Bhagola and includes the solar system.

5. JYOTISHA CHAKRA (ज्योतिष चक्र) OR THE ZODIAC

The Zone or belt in the star-dome, through the middle of which runs the Ravi-mārga (रविमार्ग) or the Ecliptic, is called the Jyotisha Chakra. It is 360° long and 16°, 18° or 20° broad according to different schools of astronomy. It is so called either because of its being chiefly used in Jyotisha (astronomy) or of its being the high road of the sun, moon and other planets.

6. RASI CHAKRA (राशि चक्र) OR THE SOLAR ZODIAC

The Zodiac when divided into 12 equal parts for the purpose of computing the month by movement of the sun along the ecliptic is called the Rāsi Chakra or the Solar Zodiac and each subdivision is called a Rāsi (राशि) or sign. In a secondary sense a Rāsi means a principal constellation in the Zodiac and in its literal sense a Rāsi means a large group of stars. The first point of Rāsi Chakra is the point 10′ east of star 6 *Minasya* ($=\zeta$ Piscium).

7. BHA-CHAKRA (भ-चक्र) OR THE LUNAR ZODIAC

The Zodiac when divided into 27 equal parts for the purpose of computing the daily movement of the moon is called the *Bha-Chakra* or the Lunar Zodiac and each of the divisions is called a Nakshatra. *Riksha-Chakra* is another name of *Bha-Chakra*. The first point of *Bha-Chakra* was at the first point of Krittikā Nakshatra in the Vedic age. The modern Luni-solar Zodiac is a combination of the Rāsi Chakra and *Bha-Chakra* commencing from the first point of Rāsi Chakra which is also the first point of Asvini Nakshatra.

In a secondary sense Nakshatra means a star, a group of stars large or small *i.e.*, either a constellation or an asterism of the Lunar Zodiac.

8. YOGATARA (योगतारा) *i.e.*, THE PRINCIPAL STAR

The word Yogatārā means the principal star in a Nakshatra used in astronomical observations and computations; the rest of the stars in the Nakshatra simply serve to facilitate its easy recognition and to give the Nakshatra a figure, generally a fancied one.

9. THE RAVIMARGA (रविमार्ग) OR THE ECLIPTIC

Marking day by day on the globe representing the starry sphere, the position of the setting sun with reference to the

nearest Zodiacal star, we get 365 points arranging themselves on a great circle around it. This great circle is called the *Ravimārga*. It passes through or by the stars Svāhā (स्वाहा), Anila (अनिल), Garddabha (गर्द्दभ), Khyāti (ख्याति), Chitrā (चित्रा), Yāmyakilaka (याम्यकीलक), Divya-Chanchalā (दिव्यचञ्चला), Duryyodhana (दुर्य्योधन), and Mulakilaka (मूलकीलक).

10. THE VISHUVAT (विषुवत्) OR THE EQUINOX

The word Vishuvat originally meant the middle one. In astronomy the term means a moving point in heaven. The sun, when at this point, makes equal day and night everywhere on the surface of the earth. The point is therefore called in western astronomy Equinox (equal day and night). It is also called Krāntipāta (क्रान्तिपात). There are two such points in heaven. One is *Mahāvishuva Samkrānti* (महाविषुव संक्रान्ति) *i.e.*, the Vernal Equinox and the other the *Jalavishuva Samkrānti* (जलविषुव संक्रान्ति) *i.e.*, the Autumnal Equinox.

11. THE VISHUVATI REKHA (विषुवती रेखा) OR THE EQUINOCTIAL

The great circle which passes through the two Vishuvat points dividing the sidereal sphere in the Northern and Southern hemisphere, is called *Vishuvati Rekhā i.e.*, the equinoctial.

Vishuvat may therefore be defined to be a point where the Ravimārga cuts the Vishuvat Rekhā, either in the middle of the sun's northing or of its southing. It is to be observed that the plane of the terrestrial equator when extended to the star-sphere will touch every point of the Vishuvati Rekhā. Vishuvati Rekhā lies equidistant from both the celestial poles, and it divides the Bhagola into two equal parts; the Northern Bhagolārddha (भगोलार्द्ध) or the Northern celestial hemisphere called the *Devabhāga* and the Southern Bhagolārddha, *i.e.*, the Southern celestial hemisphere called the *Asurabhāga*. The Vishuvati or the equinoctial passes by or through stars 1,11 Timeh ; 7 Kālapurushasya ; 11 Shashtha masasya ; 2, 8 Kanyāyāh ; 7 Garurasya and 2 Kumbhasya.

12. AMSA (अंश) OR DEGREE (°)

Every circle is considered to be divided into 360 equal parts. Each part is called an Amsa (अंश) or degree.

13. KALA (कला) OR MINUTE (′)

Each amsa is sub-divided into 60 equal parts. Each part is called a Kalā or minute.

14. VIKALA (विकला) OR SECOND (″)

Each Kalā is again sub-divided into 60 equal parts. Each part is called a Vikalā (विकला) or second. In the division of the Ravimārga into degrees a point 10′ east of the star *Mulakilaka* is to be taken as the beginning of the solar Zodiac. 30° make a Rāsi. Thus a star having a longitude of 33° is said to be at Long. 1. 3°.

15. AYANANTA (अयनान्त) OR SOLSTICE

The plane of the Ravimārga is inclined to the plane of the Vishuvati at 23° 27′.

Thus half of the former plane lies to the north of the latter plane and half to the south of it.

The point in the Ravimārga farthest from the Vishuvati on its north is called Uttara Ayanānta (उत्तर अयनान्त) *i.e.*, the Northern Solstice or Summer Solstice ; and the point in the Ravimārga farthest from the Vishuvati on its south is called Dakshina Ayanānta (दक्षिण अयनान्त) *i.e.*, the Southern Solstice or the Winter Solstice. A Solstice is equidistant from the Equinoxes.

16. RISHI-REKHA (ऋषिरेखा) ENG. SOLSTITIAL COLURE

The great circle which passes through the poles of the plane of the Vishuvati and the two solstices is called the Rishi-Rekhā (ऋषिरेखा) *i.e.*, the Solstitial Colure.

17. DHRUVA (ध्रुव) OR CELESTIAL POLE

The Bhagola (or the celestial sphere) like the terrestrial ball has its poles, which are simply the poles of the earth extended to the celestial concave. The celestial North Pole is called

Uttara Dhruva (उत्तर ध्रुव) and the celestial South Pole is called the *Dakshina Dhruva* (दक्षिण ध्रुव). The line joining the two Dhruvas is called the *Dhruvayashti* (ध्रुवयष्टि) *i.e.*, the axis of the world.

The star lying at or near the *Uttara Dhruva* is called the *Saumya Dhruva Tārā* and the star lying at or near the *Dakshina Dhruva* is called the *Yāmya Dhruva Tārā*.

18. KADAMBA (कदम्ब) OR POLE OF THE ECLIPTIC

The North Pole of the Ravimārga is called *Kadamba* and its South Pole may be called *Parakadamba* and the line joining *Kadamba* and *Parakadamba* may be called *Kadambayashti* (कदम्बयष्टि).

19. VIKSHEPA (विक्षेप) OR CELESTIAL LATITUDE

20. DHRUVAKA (ध्रुवक) OR CELESTIAL LONGITUDE

The position of a heavenly body is known by the celestial latitude and longitude called *Vikshepa* and *Dhruvaka*, the former representing its distance north or south of the ecliptic and the latter its angular distance measured eastward from a fixed point 10′ east of the star Mulakilaka and counted along the ecliptic by the arc subtending the angle.

21. HELIKA ASTA (हेलीक अस्त) OR HELIACAL SETTING

The heliacal setting of a star takes place when the sun approaches so near as to render it invisible by its superior splendour.

22. ASTAMANA (अस्तमन) OR COSMICAL RISING

A star is said to be in *astamana* when it has the same longitude with the sun and it invisibly rises with the sun.

The stars Nilamani, Brahmahridaya, Nishthya, Vāsudeva, Pratishtha, and Ratnapuri are said never to become invisible during heliacal setting. Vide S. S. IX. 18.

23. HELIKA UDAYA (हेलीक उदय) OR HELIACAL RISING

The heliacal rising of a star takes place when after having been in conjunction with the sun, during which it

remains invisible, it emerges from the sun's light so as to be visible in the morning before sunrise. In the Suryya Siddhānta *Helikaudaya* is simply called *Udaya*.

24. TARA-GUCHCHHAKA (तारागुच्छक), ENG. STAR-CLUSTER

A collection of small stars may be called Tārāguchchhaka or Guchchhaka (गुच्छक) *i. e.*, star-cluster.

25. TARA-MANDALA (तारामण्डल) OR CONSTELLATION

A large group of stars is called Tārā-mandala or Mandala. (मण्डल).

26. ASTERISM

A small cluster of stars forming part of a constellation is called 'Asterism'.

Thus most of the Nakshatras are Asterisms.

EXAMPLE 1

THE CHHAYAPATHA (छायापथ)

Ak. Batgakas (death road).
Bab. Khi-gall-a (canal of water).
Gr. Galaxias (The Milky Way).
Lat. Via Lactea, Zend. Vanant.
Pers. Rakh-vad (watery way) and Rahihajiyan.
Zend-myth : Ardvi-Sura-Anahita (The high powerful and undefiled).
Eng. The Milky Way ; Galaxy.
Italian. The path of St. James of compustilla.

The luminous Zone which is observed in a clear moonless night, as a beautiful band of soft light stretching completely across the heavens, is commonly called Chhāyāpatha (छायापथ) and Somadhārā (सोमधारा) (*a*). To an ordinary observer it appears as a sheet of white cloth 12 feet broad, forming a bandage around the two hemispheres, and torn here and there

(*a*) छायापथः देवपथः सोमधारा नमः–सरित् ।
इति त्रिकाण्डशेषः ।

as if by ravages of time. The keynote of creation seems to lie hidden in its folds. The Deva-patha has not failed to strike wonder and admiration in the minds of people both ancient and modern, savage and civilised. The charming influence of its serene light has touched the heart of one and all in every age. Contemplation of its grandeur and soft light has brought solace to many a mind affected by the throes of this miserable earth and has made many a sad heart cheerful. This led the Hindu Rishi (sage) to call it, and very rightly it seems, Somadhārā (सोमधारा) or the stream of ambrosia. And it became in course of time the idol of his nation. For centuries this noble structure in heaven puzzled the western mind. But, be it said to the credit of the Hindu Rishis that they had nearly hit the mark long before Pythagoras of Samos (B.C. 540) or the great Roman Poet Ovid (born B.C. 43) could do so in the west. Vide

नक्षत्रमार्गं विपुलं सुरवीथि ईति विश्रुतं ।

Mahā III 43. 12.

Cf. Its groundwork is of stars through which the road
Lies open to the Thunderer's abode.

Ovid.

It was Marcus Manilius, born in the first century of the Christian era, the great astronomical poet of Rome, who took the strings of Ovid and advocated the true idea that the Milky Way was composed of myriads of faint stars.

"Or is the spacious bend serenely bright,
From little stars, which there their beams unite
And make one solid and continued light."

Astronomicon.

The immortal discovery of Galileo (born A.D. 1564) has revealed to man in some measure its real nature. The misty light of Somadhārā is in reality produced by the combined lustre of myriads of faint stars.

Sweeping with his powerful reflector, Sir William Herschel came to the conclusion that there were at least two *crores* o

stars in this celestial river. It stands as a gigantic buttress of the sidereal heaven.

Vide

विष्टम्भ: दिव: Rv. ix. 89.6 ; 87.2; 86.25 ; 108.16.

The general course of the Via Lactia is a great circle passing by the two celestial poles and intercepting the Zodiac between the constellations of Mithuna (मिथुन) *i.e.*, Gemini and Karkaṭa (कर्कट) *i.e.*, Cancer in the Devabhāga, and those of Vrischika (वृश्चिक:) *i.e.*, the Scorpion and Dhanus (धनु:) *i.e.*, Sagittarius of the Asurabhāga of the celestial sphere. In the North, it flows through the constellations Kāsyapiya (काश्यपीय) *i.e.*, Cassiopeia of the west, Brahmā (ब्रह्मा) *i.e.*, Auriga of the west and Parasu (परशु) *i.e.*, Perseus of the west, on the one hand, and Sephāli (शेफालि) *i.e.*, Cepheus of the west, Hamsa (हंस) *i.e.*, Cygnus of the west and Garura (गरुड) *i.e.*, Aquila of the west, on the other.

In the South, it flows through the constellation Mriga-Vyādha (मृगव्याध) *i.e.*, (Lat.) Canis Major and abruptly terminates, opening out into a wide fan-like expanse, in Arnava-yāna (अर्णवयान) *i.e.*, (Lat.) Argo-navis not far from the star Agastya (अगस्त्य) *i.e.*, (Lat.) Canopus, on the one hand : and passing through the constellation Vedi (वेदि) *i.e.*, Ara, Mahishāsura (महिषासुर) (Lat.) Centaur and Trisanku (त्रिशङ्कु) *i.e.*, Crux ; it abruptly terminates in the same constellation Arnava-yāna near the star Kapila (कपिल) *i.e.*, η Argus, opening out again into a wide fan-like expanse.

Here the continuity of the Somadhārā is interrupted by a wide gap.

The Milky Way was regarded by the Vedic Rishis, (A) as a divine heavenly body, (B) as the path of the Sun and the spirits, (C) as the great celestial river, (D) as the celestial mountain, (E) as the celestial snake, and lastly (F) as the bridge thrown across the upper ocean.

A

As a heavenly body it is called Soma-pavamāna (सोमपवमान) *i.e.*, the flowing ambrosia.

Soma as a Vedic Devatā is threefold—(1) Soma-pavamāna (सोमपवमान) *i.e.*, the Somadhārā (सोमधारा), (2) Soma (सोम) *i.e.*, the moon, (3) Soma or Soma-rasa (सोम वा सोमरस) *i.e.*, the Soma plant or Soma-juice. Of the threefold Somas, one (*i.e.*, Soma-pavamāna) resides in the high heaven, one (*i.e.*, the moon) in the mid-region (मध्यस्थान) (*a*) and the other (*i.e.*, Soma plant) on the earth. Vide.

तृतीयम् धाम महिषः सिसासन् सोमः विराजम् अनुराजति ष्टुप् ।

Rv. ix. 96. 18.

The Vedic Rishis knew full well that the moon lies in the *antariksha* (अन्तरीक्ष) *i.e.*, mid-region and they called him Madhya-sthāna Devatā (मध्यस्थान देवता) and not Dyusthāna Devatā (द्युस्थान देवता) or a god of the high heaven like the Sun. Vide Nirukta.

While Pavamāna Soma is situated in the highest heaven, (Vide Rv. ix. 86.15 अस्य धाम प्रथमम् व्यानशे) it is stationed over and above the Nakshatras. Vide Rv. x. 85. 2.

अथो नक्षत्राणाम् एषाम् उपस्थे सोमः आहितः

While Soma, the moon, lies far below them. Vide Vish.-Purāna II. 7.

And the Suryya-Siddhānta says, in describing the eclipse, 'The moon, from below, like the cloud, obstructs the Sun's view.' Vide

छादकः भास्करस्य इन्दुः अधःस्थः घनवत भवेत

S.S. IV. 9.

But in the Purānas, Soma-pavamāna and Soma (the moon) seem to have been confounded. This accounts for the Pauranik statement that the moon stands higher than the Sun. Vide

भूमेः योजनलक्षे तु सौरं मैत्रेय ! मण्डलम् ।
लक्षात् दिवाकरस्य-अपि मण्डलं शशिनः स्मृतम् ।

V.P. II. 7. 5.

Note : The description applies to the Soma-pavamāna, otherwise called Somadhārā *i.e.*, the stream of Ambrosia and not to Sasi (शशी) or the moon.

(*a*) The moon is therefore called Madhya-sthana-Devatā, the god of the middle region. Vide Nir N.

SOMADHARA (सोमधारा)

In the Vedas, Somadhārā *i.e.*, the Milky Way is called the stream of Ambrosia or the Dhārā (धारा) (stream) of Soma (सोम) ambrosia. Vide

सोमस्य धारा पवते

Rv. ix. 80. 1.

Like the Sun it stands high in Heaven and lightens the world. Vide

अयम् विश्वानि तिष्ठति पुनानः भुवना उपरि
सोमः देवः न सूर्य्यः

Rv. ix. 54. 3.

It is the spring of waters. Vide

असत् ते उत्सः गृणते नियुत्वान्

Rv. ix. 89. 6.

It is a sea. Vide

त्वम् समुद्रः असि

Rv. ix. 86. 29.

It is the King of the Rivers and it flows in thousand streams. Vide

राजा सिन्धूनाम् पवते पतिः दिवः ऋतस्य याति पथिभिः

Rv. ix. 86. 33.

सहस्रधारः शतवाजः इन्दुः

Rv. ix. 100.10.

It stands as a very high buttress of the heavens. Vide

दिवः विष्टम्भः उत्तमः

Rv. ix. 108. 16.

The King of the Rivers wears a sheet of cloth. Vide

राजा सिन्धूनाम् अवसिष्ट वासः

Rv. ix. 89. 2.

It is visible at night and not at day. Vide

दिवा हरिः दद्दशे नक्तम् ऋज्रः

Rv. ix. 97. 9.

It is of white colour in heaven. Vide

श्वेतम् रूपम् कृणते

Rv. ix. 74. 7.

It encompasses the whole heaven. Vide

विमानः रजसः

Rv. ix. 62. 14.

The horse has moved along the pathways and Pavamāna flowed like rain from heaven. It comes to us with thousand streams and sinks in the firmament and upon the bosom of its mother. Vide

प्रो स्यः वह्निः पथ्याभिः अस्यान् दिवः न वृष्टिः पवमानः अक्षाः, सहस्रधारः असदत् नि अस्मे मातुः उपास्थ वने आ च सोमः ।

Rv. ix. 89. 1.

It fills the four seas. Vide

रायः समुद्रान् चतुरः अस्मभ्यम् सोम विश्वतः ।
आ पवस्व सहस्रिणः ॥

Rv. ix. 33. 6.

It made the stars shine. Vide

.........अरुरुचत् वि दिवः रोचना कविः

Rv. ix. 85. 9.

It gives light to the Sun. Vide

तव ज्योतींसि पवमान ! सूर्य्यः

Rv. ix. 86. 29.

अजनयत् सूर्य्य ज्योति इन्दुः

Rv. ix. 97. 41.

While the moon shines with light borrowed from the sun. Vide

सविता सूर्य्याम् प्रायच्छत् सोमाय राज्ञे ।
निरुक्त पक्षे ज्योतख्राम सोमाय ददाति
यदुक्तम् "आदित्यतः अस्य दीप्तिः भवति" इति

Nirukta xi. 1. 8.

Somadhārā came from the highest peak of mountain (the highest ridge of heaven). Vide

एषा आ ययौ परमात् अन्तः अद्रेः

Rv. ix. 87. 8.

Note : In the Purānas the Gaṅgā is said to be the daughter of the *Hima-vat* (The Himalaya).

It was brought down to earth by the daughter of the Sun.

Vide.

पर्जन्य वृद्धम् महिषम् तम् सूर्य्यस्य दुहिता आ अभरत्

Rv. ix. 112. 3.

Note : This reminds one of Raja Bhagiratha's bringing down the Gaṅgā.

And flowing in the heaven, from the sky, the streams fall on the summit of the earth. Vide

पवमानाः दिवः परि अन्तरीक्षात् अमृक्षत पृथिव्याः अधि सानवि

Rv. ix. 63. 27.

Note : This summit is, we suppose, called the Peak of Mount Sumeru in the Purānas. Vide

मेरु पृष्ठे पतति उच्चैः निष्क्रान्ता शशि मण्डलात्

V.P. II. 8. 107

The Somadhārā is divided into seven currents flowing through the sky. Vide

सप्त प्रवतः आ दिवम्

Rv. ix. 54. 2.

cf. विससर्ज्ज ततः गङ्गाम् हरः विन्दुसरःप्रति
तस्याम् विसृज्यमानायाम् सप्त स्रोतांसि जज्ञिरे

Rām I. 34. 11.

Compare also the seven parts into which the Heavenly stream is divided by the Babylonians.

(1) The river of the fishes.
(2) The river of the birds.
(3) The river of the serpents.
(4) The river of the goddess Gula (Gurra—watery deep).
(5) The river of god Marduk (Perseus).
(6) The river Gar-gal (the high cloud).
(7) The river of the Sun-God (Tammuz-Ningir-Su-Phaethon-Orion).

Vide. R. Brown Vol. I. 93. and Vol. II. 203.

As the child of Virāt (विराट्) *i.e.*, firmament, the queen of King *Varuna*, the Milky Way is called Virāja (विराज). Vide

वरुणस्य विराट्

T. Ar. III. 9.

विराजः नामा कामदुघा अमुत्र अमुस्मिन् लोके ।

T. Sam. IV. 4. 11.

Varuna is equivalent to the Sun and Virāja (विराज) becomes, in a feminine character, Virajā alias Suryyā (सूर्य्या), the daughter of the Sun (सूर्य्य), who mounted the car of the Asvins (अश्विद्वयम्) the stars *Soma* and *Vishnu* (the stars Castor and Pollux of the west). Vide

आ वाम् रथम् दुहिता सूर्य्यस्य कार्ष्म इव अतिष्ठत् अर्वता जयन्ती ।

Rv. I. 116. 17.

And every star-gazer can verify the statement by a glance at the Mithuna Mandala (मिथुन मण्डल) the constellation Gemini where the Milky Way passes close by the Twins.

Suryyā again is the consort of the Sun. Vide

सूर्य्या सा पुनः इयम् "सूर्य्यस्य पत्नी" ।

Nir. XII. 1.7

This *Suryyā* again plays an important part in Hindu myths. Under the name Devaki (देवकी) or Devakini (देवकिनी) *Suryyā* became the consort of Vasu-Deva (वसुदेव). Vide

देवक्या सूर्य्यया सार्धम् प्रयाणे रथम् आरुहत् ।

S.B. X. 1.

Cf. Ak. Dauke = Dav-kina = The lady of the Earth. (R. Brown. I. 353.)

The Milky Way as *Soma-pavamāna* (male), is the father of the gods. Vide

पिता देवानाम् जनिता सुदक्षः विष्टम्भः दिवः धरुणः पृथिव्याः ।

Rv. IX. 87. 2.

And as *Somadhārā* (female), it is called Aditi (अदिति), the great mother of the Sun and other gods. Vide

माता देवानाम् ।

Rv. I. 113. 19.

It begot all the heavenly luminaries and the Sun in waters. Vide

जनयन् रोचना दिवः जनयन् अप्सु सूर्य्यम् ।

Rv. IX. 42. 1.

In the shape of a stream it flows on, in accordance with the primeval plan. Vide

एषः प्रत्नेन मन्मना देवः देवेभ्यः परि । धारया पवते सुतः ॥

Rv. IX. 42. 2.

Surely, all this evidently means the *Somadhārā* and not the moon or the *Soma* plant.

Elsewhere the Milky Way is considered as divided into two portions by the celestial equator, the northern and the southern semicircles. The former is called Aditi (अदिति) the unbroken and the latter Diti (दिति) *i.e.*, chaos, the broken, the two wives of *Kasyapa* (the tortoise-shaped firmament). One is the mother of the gods and the other the mother of the demons. Vide

अतः चक्षाथे अदितिम् दितिम् च ।

Rv. V. 62. 8.

And as *Aditi* is identical with *Suryyā*, she is said to be the wife of the Sun.

Vide Sukla Yv. XXIX. 60.

It is the famous Tārāvati (ताराव्रती). (Vide : K. P. 48.)

In the Paurānik version of the Vedic myth, *Suryyā* is called Bhadrā (भद्रा) or Subhadrā (सुभद्रा) and as such she is the sister of *Rāma-Krishna* reduplicated in the star Soma (सोम) and Vishnu (विष्णु) *i.e.*, Castor and Pollux ; and the statues of the Trio are said to be in the holy Temple of Puri. *Subhadrā* eloped with *Arjuna*, the hero of the *Mahābhārata*. Compare : Helena was the sister of the Twins, Castor and Pollux and she first eloped with Theseus and Pirithous (पार्थ ?).

B

The Milky Way was supposed by the early Vedic astronomers to be the sun's path (*a*). Nor were the Vedic astronomers far off from the mark so far as the equinoxes are concerned. The Vernal and Autumnal equinoxes were in the midst of the Milky Way from before B.C. 4850 to B.C. 3725, taking the rate of precession as laid down in the Siddhāntas *viz*., 75 years per degree.

King *Varuna*, says the Vedas, hath made a spacious pathway for the sun to travel. Vide

उरुम् हि राजा वरुणः चकार सूर्य्याय पन्थाम् अनु एत वा ऊ ।

Rv. I. 24. 8.

It was called the path of *Aryaman* the sun. Vide

(*a*) Cf. The theory of Metrodorus (B.C. 277).

कत् अर्य्यम्नः महः पथा अतिक्रामेम ...॥

Rv. I. 105. 6.

Indra is also said to have cut the path for Aryaman (अर्य्यमन्) the sun. Vide

इन्द्रः वृत्राय वज्रम् उदयच्छत् । सः दिवम् अलिखत् ।
सः अर्य्यम्नः पन्था अभवत् ॥

T. Br. I. 7. 6. 6.

Atharvan is said to have laid the path for the rising sun to travel; then the loving sun, the guardian of Law sprang up. Vide

यज्ञैः अथर्व्वा प्रथमः पथः तते ततः सूर्य्यः व्रतपाः वेनः आ अजनि ।

Rv. I. 83. 5.

The path of the Deva (देव) the sun, came to be called Deva-patha (देवपथ) ; but it was also used by the Pitris (पितृगण) the spirits of the dead. Vide

आयान्तु नः पितरः सौम्यासौ अग्निस्वात्वाः पथिभिः देवयानैः ।
इति श्राद्धमन्त्रम् ।

A part of this path was supposed to be followed by the dark sun (*a*) in his southing and setting, and this portion was called the Amsumati (अंशुमती). Vide

अव द्रपसः अंशुमतीम् अतिष्ठत् इयानः कृष्णः (*a*) दशभिः सहस्रैः

Rv. VIII. 85. 13.

(*a*) Who is this Krishna (कृष्ण) ? *Nirukta* gives the answer. It is the night-sun. Vide—

अधः रामः सावित्रः

Yv. xxix. 19. 58.

रामः चारौ सिते असिते

Vaijayanti,

तस्मात् रामशब्दः कृष्णपर्य्यायः

Nir. N. 1. 7.

The sun has two separate phases, one form comes on, and the other is reverted and thereby he causes night and day. Vide

आरोहन् शुक्रः बृहतीः अतन्द्रः द्वे रूपे कृणुते रोचमाणः । अभि अन्यत् एति परि अन्यद् अस्यते अहोरात्राभ्यां महिषः कल्पमानः ॥

Av. XIII. 2. 42.43

Cf. Tennyson's "Darkness rises from the fallen sun."

The Milky Way is also the path the Pitris follow on their way to Yama's abode and as such it is guarded by his two dogs [=the stars Syām (श्याम) and Sabala (शबल) *i.e.*, the stars λ and υ Scorpionis]. Vide

यौ ते श्वानौ यम ! रक्षितारौ चतुरक्षौ पथिरक्षी नृचक्षसौ ।

Rv. X. 14. 11.

दिव्यौ श्वानौ श्यामशबलौ वैवस्वतकुलोद्भवौ । (इति सायणधृतम्)

That same path leads either to the gods or to the fathers.

S. Br. I. 93. 2.

Two paths are known, one leading to the gods and the other leading to the fathers.

Mahā. xiii. 525.

Note : *Yama* is the fireless sun as observed at the time of setting and rising, as well as at the time of its southing. He was born first of all mortals and he died first. He was placed at the head of the *Pitris* in heaven and was called *Pitri-rāja* or *Dharma-rāja*, and his last abode was star 1. *Sisumārasya* (=β Ursæ Minoris). In course of time he came to be regarded as the punisher of the sins of the wicked people and he had to reign also in Hell, supposed to be near the South Pole.

Thus both the northern and the southern paths of the Milky Way might be called Yama's patha. But as it is, the portion followed by the sun in his southing is called *Yama's patha*, otherwise *Chhāyāpatha*, (छायापथ) (*a*) and the part followed by the sun in his northing is called *Deva-Patha.* Vide

उत्तरः सवितुः पन्था देवयानः च सः स्मृतः

V. P. II. 8. 85.

इतुरक्त्वा तु तदा ब्रह्मा तेषाम् पन्थानमाकरोत्
दक्षिणायणम्-संज्ञः तु पितृणाम् तु पिताभहः ॥
इति वाराहे पितृसर्गे
पितृयानः सः वै पन्था वैश्वानर-पथात् वहिः

V. P. II. 8. 80.

(*a*) Literally the path of the shades of the dead.

2

The *Somadhārā* is also called Svāti-patha (स्वातीपथ). Vide

स: नलेन कृतः सेतुः सागरे मकरालये ।
शुशुभे सुभगः श्रीमान् स्वातीपथः इव अम्बरे ॥

Rām. VI. 22. 70

The Matsya-purāna calls it the *bright-path* leading to the abode of gods. Vide

एषः वः विरजाः पन्था दृश्यते देवसञ्चगः ।

M. P. 43. 16.

The Mahābhārata calls it, as we have shown, *Sura-vīthi* (सुरवीथि) or the Sun's path. And the Rāmāyana calls it *Rāja-patha* (राजपथ) or the road of *Indra*, the King of Heaven Vide

ददर्श तम् राजपथम् दिवि देवपतिः यथा

Rām. II. 17. 6.

Kālidasa calls it *Svarga-paddhati* (स्वर्गपद्धति). Vide

पीड़यिष्यति न मां खिलीकृता स्वर्गपद्धतिः अभोग लोलुपम् ।

Rag. ix. 87.

Compare : 'It was the passage of Ghosts', 'Path of Spirits', 'Road of Souls' and 'the Death Road of the Babylonians'.—Robert Brown. I. 105, II. 215.

C

As a river, the Vedas call it Rasā (रसा).
"As Rasā flows around the world." Vide

परि नः शर्म्मयन्तग्रा धारया सोम ! विश्वतः
सर आरसा इव विष्टपम् ।

Rv. IX. 41.6.

समुद्रे यस्य रसाम् इत् आहुः ।

Av. IV 2.5.

"How hast thou made thy way over *Rasā's* waters." Vide

कथं इयम् रसायाः अतरः पयांसि

Rv. X. 108. 1.

Grammatically, *Rasā* = *Sarasvati* (सरस्वती). Vide, Nirukta. XI. 3. 4.

The *Somadhārā* is called *Urjāni* (उर्ज्जानी) *i.e.*, one full of waters. *Urjāni*, say the Vedas, hath, O *Asvins* ! mounted on your car. Vide

उर्ज्जानी रथम् अश्विना अरुहत्

Rv. I. 119. 2.

The celestial river, we have shown, is divided into seven branches, and the seven sacred rivers of the Hindus are reduplicated in those branches.

Many a river of Hindusthan was reduplicated in the Milky Way at the Paurānic age.

It became the *Sarasvati*, the *Ākāsa-Gaṅgā*, the *Brahmaputra*, the *Yamunā*, the *Mahānadi*, the *Devanadi*, and the *Virajā*.

After the rivers Sarasvati (सरस्वती), Brahmaputra (ब्रह्मपुत्र), and Mahānadi (महानदी), it was called the *Sarasvati*, the *Brahmaputra*, and the *Mahānadi*. After the Gaṅgā (गङ्गा), it was called the Ākāsa-Gaṅgā (आकाश गङ्गा) and in fact both the celestial and the terrestrial streams were linked together. After the Haimavati (हैमवती-गङ्गा), it was so called. After the Yamunā (यमुना), it was called Divya-Yamunā (दिव्य यमुना). As the river of the Gods, it was called Deva-nadi (देवनदी). As it lies beyond the creation, it was called Virajā (विरजा).

Sarasvati, say the Vedas, illuminates the vast upper Sea with her lustre. Vide.

महुः अर्णः सरस्वती प्रचेतयति केतुना

Rv. 1. 3. 12.

The course of the Ākāsa-Gaṅgā (आकाश गङ्गा) and that of the terrestrial *Gaṅgā* are said to form an entire stream, and from its rise in the highest heaven to its fall in the Bay of Bengal, the stream is traced in the Purānas with admirable exactness.

The portion of the heavens lying to the north of the *Rishis* in the constellation Saptarshi Mandala, which is surrounded by the circle of *Dhruvas* (*a*) *i.e.*, the northern

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(*a*) नत्तत्राणि च सर्व्वाणि मामकाणि ध्रुवानि अथ । २८
यावत् लोकाः धरिष्यन्ति तिष्ठन्तु एतानि सर्व्वशः । २९

Rām. I. 60.

pole stars of successive ages and at the centre of which lies the *Kadamba i.e.*, the Pole of the ecliptic, is called the *Tritiya Vishnu-Pāda* (तृतीय विष्णुपाद) or the *param-pada* (परमपद) of *Vishnu* (*a*). Vide

ऊर्द्ध उत्तरम् ऋषिभ्यः तु ध्रुवः यत्र व्यवस्थितः
एतत् विष्णुपदं दिव्यं तृतीयं व्योम्नि भास्वरम् । ६३
यत्र गत्वा न शोचन्ति तत् विष्णो परमं पदम् । ६५
धर्म्म ध्रुवाद्याः तिष्ठन्ति यत्र ते लोकसाक्षिणः । ६६

V.P. II. 8

There, in the third *Vishnu-pāda*, lies the source of the holy stream. The nail of *Vishnu's* left toe rent the heaven, and waters lying outside the universe, flowed through the hole (*b*). *Dhruva i.e.*, the north Pole star holds the streams on his head (*c*).

The stream passes through the *Saptarshis* in Kāsyapiya Mandala (=constellation Cassiopeia) and flows through the Brahma-Mandala (=constellation Auriga). At last it falls on the summit of Sumeru (सुमेरु) *i.e.*, the north pole of the earth.

Note : This last fall is a very deep leap. Vide

वामपादाम्बुजांगुष्ठनखस्रोतः विनिर्गता
विष्णोः बिभर्त्ति यान् भक्त्या शिरसा अहर्निशं ध्रुवः । १०४
ततः सप्तर्षयः यस्या प्राणायाम-परायणाः
तिष्ठन्ति वीचिमालाभिः उह्यमानजटाः जले । १०५

V.P. II. 8.

तत् जलं पावनं पुण्यं ब्रह्मादीन् पावयन् पुनः

V.N. P. XI. 180.

मेरुपृष्ठे पतति उच्चैः निष्क्रान्ता शशिमण्डलात्

V.P. II. 8. 107.

(*a*) This portion of the heavens is, we believe, called Sarvato-Bhadra (सर्व्वतोभद्र) *i.e.*, the *best* of all in the *Tantras*, which is said to be surrounded by the great Serpent (=*Takshaka*).

(*b*) This hole is called Brahmarandhra (ब्रह्मरन्ध्र) in the *Tantras*. Vide

सोमधारा क्षरेत् या तु ब्रह्मरन्ध्रात् वरानने ॥—Tantrasāra.

(*c*) This may not be quite correct with respect to the present Pole star, but it holds good with respect to the star β Cephei which was the Polaris about B. C. 20750 and which again shall be the Polaris A.D. 6250.

Here the stream is divided into four channels *viz.*, *Sitā*, *Alakānandā*, *Chakshus*, and *Bhadrā*. Vide

सीता च अलकानन्दा च चक्षुः भद्रा च संस्थिता ।

V.P. II. 8. 108.

Sitā represents the eastern portion of the celestial stream. Vide

पूर्व्वस्याम् दिशि सीता त्वम्

V.D.P. I. 5. 88.

And *Bhadrā* otherwise *Subhadrā* represents the northern portion of it. Vide

भद्राख्या च उत्तरत्व वै

V.D.P. I. 5. 88.

Note : The *Somadhārā* as Sitā (सीता) became the heroine of the Rāmāyana, and a part of it flowing through the Nakshatra Mula presided over by *Rāvana*, came to be known, we believe, as the *Rāvana-Gaṅgā* (*a*) ; as *Bhadrā* otherwise *Subhadrā* (सुभद्रा), she became the sister of *Rāma-Krishna*. Vide

आषाढ़स्य सिते पक्षे द्वितीया पुष्यसंयुता
तस्याम् रथे समारोप्य रामम् माम् भद्रया सह ।
स्कन्द पुराण ।

The southern branch of the Heavenly stream named Alakānandā (अलकानन्दा) flowed southward from the mount *Sumeru* and crossing the Himalaya mountain (हिमालय पर्वत), it entered into India. In the plains of India, it flows eastward to the sea. Vide S.B.V. 17. 1. 10.

It is interesting to note that according to the Rāmāyana, the Holy stream first falls on the head of Siva (शिव) represented, we believe, by the constellation Sephāli (शेफालि) *i.e.*, Cepheus of the West [originally, (Ph) *Keph*, the divine stone =Baitylos] (*b*). Vide

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(*a*) Cf. "The twentieth Persian lunar Mansion is Vanant (=θ, ι. κ, λ, υ Scorpionis). The Vanant Yasht is a prayer addressed to the Star Vanant, by which the Dasturs understand the Milky Way." Here the Milky Way derives its name from the asterism Vanant (=Sk. Mula.)

(*b*) Vide, R. Brown I. 30.

गङ्गायाः पतनम् राजन् पृथिवी न सहिष्यते
ताम् वै धारयितुम् राजन् न अन्यम् पश्यामि शूलिनः । २४ ।

Rām. 1. 42. 24.

आकाशात् अपतत् राम शिवे शिवशिरसि उत

Rām. I. 43. 5.

This is astronomically more correct than the Purānas.

The stream is called also Virajā (विरजा).

Once *Srikrishna* was enjoying the company of *Srimati Rādhā* in the hall of music and dancing, within the lonely extensive wood (महारण्ये) of heaven. But he left her and sought the company of another *Gopi* named Virajā (विरजा). *Rādhā* was informed of her lover's unfaithfulness. She and other *Gopis* raised a cry which frightened away *Krishna* from the company of *Virajā*. *Virajā* died of fear for detection. She turned into a river. That river encompasses the whole celestial sphere. *Krishna* sorely felt her absence and began to cry bitterly on the river's bank. At his request *Virajā* appeared before him in the shape of the River-goddess. The lovers met again. She bore him seven sons, who incurred her displeasure. Accursed by her, they had to come down to the earth from heaven in the shape of the seven seas. Vide, B.V.P. II. 49.

एकदा राधिका सार्द्धं गोलके श्रीहरिः स्वयम् ।
विजहार महारण्ये निर्ज्जने रासमण्डले ॥
...गोपिकां विरजां अन्यां...जगाम ।
श्रुत्वा कोलाहलं शब्दं गोपिकानां हरिः स्वयम् ।
ज्ञात्वा च कोपितां राधां अन्तर्धानं चकार ह ।
विरजा राधिकाशब्दात् अन्तर्धानं हरेरपि ।
दृष्ट्वा राधा भयार्त्ता सा जहौ प्राणांश्च योगतः ।
सद्यस्तत्र सरिद्रुपं तत् शरीरं बभूव ह ।
व्याप्तं तु वर्त्तुलाकारं तथा गोलकमेव च ।
श्रीकृष्णं विरजां दृष्ट्वा सरिद्रूपां प्रियां सतीं
उच्चैः रुरोद विरजा तीरे नीरमनोहरे ।
नद्यधिष्ठातृदेवी त्वं भव मूर्तिमती सती ।
सद्यः बभूव तत्रैव धन्या गर्भवती सती ।
तस्थौ तत्र सुखासीना सार्द्धं पुत्रैश्च सप्तभिः ।
शशाप स्वसुतं कोपात् लवणोदो भविष्यति ।
शशाप सर्व्वान् वालांश्च यान्तु मूढ़ा रसातलं ॥

Elsewhere the same Purāna speaks of the *Virajā* (Milky Way) as the great celestial river. Vide

गोलोकम् दर्शयामास विरजाम् च नदीश्वरीम्

V.P. III. 43. 24.

It is the Vasudhārā (वसुधारा) of the Jainas.

Close to the mount Gayasiras (गयशिरः) *i.e.*, the setting hill, flows the holy *Mahānadi*. Vide

नगः गयशिरः यत्र पुण्या चैव महानदी

Mahā. III. 43. 11.

It is the *Deva-nadi* and the *Ākāsa-Gaṅgā*. Vide

एषा देवनदी पुण्या पार्थ ! त्रैलोक्यपावनी ।
आकाशगङ्गा राजेन्द्र ! तत्र आप्लुय गमिष्यसि ॥

Mahā. XVIII. 3. 28.

It is the *Divya-Yamunā* near the constellation Orion. Vide

प्राक् एव दिव्य यमुना तं त्यक्त्वा ब्रह्मणः सुतं ।
पुनः पतति लौहित्ये गत्वा द्वादश योजनं ॥

K.P. 82. 83.

Compare : The Milky Way was called the inaccessible stream by the old Egyptians and the canal of waters or the stream of the upper sky by the Babylonians. Vide : R. Brown II. 34.

D

It is called a mountain, both in the Vedas and the Purānas. Vide

शम् रोदसी वहती शम् नः अद्रिः शम न देवानां सुहवानि सन्तु ॥

Rv. VII. 35. 3

Vide also

रुद्रण शुक्रमुत्सृष्टम् तत् श्वेतः पर्व्वत अभवत ॥

Mahā. III. 228. 27.

अपश्यत पर्व्वतम् श्वेतम् शर स्तस्मैः सुसंवृतम् ॥

Mahā. III. 224, 10.

E

The *Somadhārā* looks like a great serpent encircling the heavens.

"With laud I sing the *Ahi*, born of floods. He lives in the waters of 'the stream in the middle air (Milky Way).' Vide

अप्जाम् उक्थैः अहिम् गृणीषे बुध्न नदीनाम् रजःसु सीदन् ।।

Rv. VII. 34. 16.

This serpent is called *Ahir-budhna* and it is inseparable from the Milky Way.

The river *Rasā* is also called *Surasā*, the great serpent mother. Vide

ततः देवाः सगन्धर्व्वाः सिद्धाः च परमर्षयः ।
अब्रुवन् सूर्य्यसङ्काशाम् सुरसाम् नागमातरम् ।।

Rām. VI. I. 139.

The "infinite" Milky Way, as a snake, is called Ananta (अनन्त) who holds up the Earth on his head. Vide धरुणः पृथिव्याः । Rv. IX. 87. 2.

And as it lies beyond the Universe, the snake is called Sesha (शेष) the Last.

The Vedic *Somadhārā* = Pauranic Adri-Sutā Subhrā (अद्रिसुता शुभ्रा), compares well with the *Ardvi Sura Anahita* (Sk. अनसिता) of the Avesta.

"The spring named *Ardvi Sura*, says the Avesta, purifies the seed in man, the fruit in the woman's womb, and the milk in a woman's breast. It is the holy water-spring.

"*Ardvi Sura Anahita* (the high, powerful, undefiled) is the heavenly spring from which all waters on the earth flow down, whose fountains are on the top of the mythical mountain *Hukairya* in the star region, whom *Ahura Mazda*, at the prayer of *Zarathustra*, ordered to come down from the stars to the earth made by *Ahura*, that the great lords might worship her. These great lords are *Ahura* himself, Yima (यम) Azi-Dahaka (अहिदहक), Thraetaona (त्रेतन) Keresaspa (कृशाश्व) Kava-usa (काव्य उसना) Vaisāka's sons (विशाखा पुत्र) and Thrita (त्रित)."

"She is connected with Azi (अहि) the storm fiend. She is a maid, fair of body, most strong and nobly born. She wears a crown with hundred stars ; she wears a mantle fully embroidered with gold" ; "she wears a golden necklace and ear-rings."

Cf. The great Vālmiki describes *Lakshmi* who rose out of the ocean when it was churned, in a similar strain. Vide

Up floated on her lotus-bed
A maiden fair and tender eyed,
In the young flush of beauty's pride,
She shone with pearl and golden sheen,
And seals of glory stamped her queen.
On each round arm glowed many a gem,
On her smooth brows a diadem.
Rolling in waves beneath her crown,
The glory of her hair flowed down.
Pearls on her neck, of price untold,
The Lady shone like burnisht gold.

Prof. Griffith

"Her descent from the golden *Hukairya* is said to be a very deep one.

The large river known afar, which is as large as the whole of all waters that run along the surface of the earth, falls powerfully from the height of *Hukairya* (= Huger = Alborz) down to the sea *Vauro-Kasu* (वरुणकशा) *i.e.*, the Arabian Sea. She has a thousand cells and a thousand channels." Vide Abanyast, Avesta (*a*).

F

Soma-pavamāna himself forms his own bridge across the waters on high.

This King (Soma-pavamāna) is praised and honoured as ordained, himself the bridge, the sage spreads over the waters.

Prof. Griffith

Vide

अपः च विप्रः तरति खसेतुः ।

Rv. X. 61. 16.

The bridge thrown across the upper sea by Sri-Rāma is only another phase of the celestial bridge.

The bridge, says Vālmiki, glittered like the Milky Way in heaven. Vide

(*a*) Prof. M. Haug identifies Ardvi-Sura-Anahita with the planet Venus.

स: नलेन कृत: सेतु: सागरे मकरालये ।
शुशुभे सुभग: श्रीमान् स्वातीपथ: इवाम्बरे ॥

Rām. VI. 22. 70.

And lastly, with its Seven Streams the well-known Vasudhārā of our Vedic ceremonies well represents the Celestial River with its Seven Currents.

Mah. XII. 338.

EXAMPLE II.

NAKSHATRA KRITTIKĀ (कृत्तिका नक्षत्र)

The first Nakshatra of the lunar Zodiac and the third Nakshatra of the Luni-Solar Zodiac is the Nakshatra Krittikā (कृत्तिका). It consists of six small stars out of a group of eight. The asterism is also called Shat Krittikā (षट् कृत्तिका) but no names of the individual stars composing the Nakshatra are to be found in the Siddhāntas. However, we can have their names, as well as the names of the other two stars in the group, from the Purānas and the Mahābhārata. The whole group is called the *Pleiades* in the West. About the *Krittikās*, the Satapatha Brāhmana declares :

1. He may set up the two fires under the *Krittikās,* for they, *Krittikās,* are doubtless *Agni's* asterism. So that, if he sets up his fires under *Agni's* asterism (he will bring about) a correspondence (between his fires and the asterism) : For this reason he may set up his fires under the *Krittikās.*

2. Moreover the other lunar asterisms consist of one, two, three or four stars, so that the *Krittikās* are the most numerous (of asterisms) : Hence he thereby obtains an abundance. For this reason he may set up his fires under the *Krittikās.*

4. On the other hand, (it is argued), why he should not set up the fires under the *Krittikās.* Originally, the latter were the wives of the *Rikshas* (ऋक्ष) *i.e.,* Bears. For the seven *Rishis* were in former times called the Rikshas (ऋक्ष) *i.e.,* Bears. They were, however, precluded from intercourse with their husbands, for the latter, the seven *Rishis* rise in the north, and they (the *Krittikās*) in the east.

5. But he may nevertheless set up (his fire under the *Krittikās*) : For *Agni* doubtless is their mate, and it is with *Agni* that they have intercourse. For this reason, he may set up (the fire under the *Krittikās*).

The Shat Krittikās (षट् कृत्तिका) with Arundhati (अरुन्धती) are the seven wives of the Saptarshis (सप्तर्षि), the seven sages, though originally as a single Bear-constellation had only one wife. Vide

यत्रा सप्त ऋषीन् परः एकम आहुः ।

Nir. X. 3. 2.

ऋषीणाम् अरुन्धती ।

T. Ar. III. 9.

The later seven wives are Sambhuti (संभूति), Anasuyā (अनसूया), Kshamā (क्षमा), Priti (प्रीति), Sannati (सन्नति), Arundhati (अरुन्धती) and Lajjā (लज्जा). Vide

मरीचिः अत्रिः पुलहः पुलस्त्यः क्रतुः अङ्गिराः ।
वशिष्ठः च महाभागः ब्रह्मणो मानसाः सुता ॥
संभूतिः अनसूया च क्षमा प्रीतिश्च सन्नतिः ।
अरुन्धती तथा लज्जा तत्पत्न्यो लोकमातरः ॥

इति पाद्मे स्वर्गखण्डे, ११ ।

Of these seven wives *Arundhati* alone has a place in the Saptarshi Mandala (सप्तर्षि मण्डल). The Mahābhārata gives an elaborate exposition of the narrative hinted at in the Satapatha Brāhmana.

Seeing these wives of the best of the Brāhmanas (*Saptarshis*), the mind of Agni (अग्नि) became agitated. On a second thought, after being baffled in all his efforts to win the hearts of these Brāhmana ladies, and with a heart burning with passion Agni repaired to a forest with a determination to destroy his own life. At the same time Svāhā (स्वाहा) daughter of *Daksha,* set her heart on him and she came to know all that had led *Agni* to hide himself in the deep forest. Actually tortured by the pangs of love, she thought within herself, 'as I too am distressed with love, I shall assume the guise of the wives of the seven *Rishis* and in that disguise

I shall seek the Fire-God, so smitten with their charms. This done he will be gratified and my desire too will be satisfied.'

Mahā III. 223. 33-41

The beautiful Sivā (शिवा) endowed with great virtues, beau.y and unspotted character was the wife of Angiras (अङ्गिरा:). That excellent lady *Svāhā* first assumed the disguise of *Sivā* and went to *Agni* and told him her mind. *Agni* filled with joy, married her and that lady joyfully took the germ in her hands. And then she thought within herself that those who would observe her in that disguise in the forest, would cast an unmerited slur upon the conduct of the Brāhmana ladies in connection with *Agni.* Therefore, to prevent this, she should assume the disguise of a bird and in that state, she would more easily get out of the forest.

Then assuming the disguise of a winged creature, she went out of the forest and reached the white mountain, begirt with numbers of quivers. She, quickly ascending a peak, threw that germ into a cave and then assuming successively the forms of other five wives of the seven Rishis she continued to dally with *Agni*. But on account of the great ascetic merit of *Arundhati* and her devotion to her husband she was unable to assume her form. And O ! Chief of Kuru's race ! *Svāhā*, on the first lunar day, threw six times into that cave, the germ of *Agni* and thrown there, it produced a male child endowed with great power. And from the fact of its being regarded by the *Rishis* as cast off, the child born therefrom came to be called by the name of Skanda (स्कन्द), and the child had six faces twelve ears, as many eyes, hands and legs, but one neck and one stomach.

Mahā. III. 224. 14-17

And those seven *Rishis*, when they heard that a son of great power had been born to them, divorced their six wives with the exception of *Arundhati*.

Mahā. III. 225. 8.

The boy addressed *Indra* saying "Do thou appoint me as the leader for the well-being of cows and Brāhmanas."

And he was appointed by *Indra* and other Gods. Then *Indra* thought of *Deva-Senā* and on the recommendation of *Indra*, *Skanda* duly married her.

Mahā. III. 228. 22-23. 45, 47

These six wives of the seven *Rishis* then repaired to the camp of *Skanda*. Disowned by the *Rishis*, the virtuous ladies of high religious merit, quickly came to the husband of *Deva-Senā* and told him. "We, O son ! have been cast out by our god-like husbands without any cause," and on his recommendation Sakra (शक्र) assigned them a place in the Zodiac, fallen vacant by the absence of Abhijit (अभिजित्) from it, out of her jealousy to her rival Rohini (रोहिणी), and the asterism *Krittikā* presided over by *Agni* shines with seven heads. For Vinatā (विनता) also said to Skanda "Thou art as a son to me ; I desire, my son ! to live with thee always." 'Be it so' said *Skanda*, 'thou shalt live honoured by thy daughter-in-law.'

Mahā. III. 229. 1. 3. 11, 13.

पत्नीः दृष्ट्वा द्विजेन्द्राणां वह्निः कामवशं ययौ । ३।२२३।३३
भूयः सः चिन्तयामास न न्याय्यं क्षुभितः ह्यहं । ३४ ।
कामसन्तप्तहृदयः देहत्यागः विनिश्चितः ।
अलाभे ब्राह्मणस्त्रीणां अग्निः वनं उपागमत् । ३७
स्वाहा च दक्षदुहिता प्रथमं कामयत् तदा । ३८
सा तं ज्ञात्वा यथावत् तु वह्निं वनं उपागतं । ७९
तत्वतः कामसन्तप्ता चिन्तयामास भामिनी ।
अहं सप्तर्षि-पत्नीनां कृत्वा रूपानि पावकं । ४०
कामयिष्यामि कामार्त्ता तासां रूपेण मोहितं ।
एवं कृते प्रीतिरस्य कामावाप्तिश्च मे भवेत् । ४१
शिवा भार्य्यात्वङ्गिरसः शीलरूपगुणान्विता
तस्याः सा प्रथमं रूपं कृत्वा देवी जनाधिप । ७ । २२४ । १
जगाम पावकाभ्यासं तञ्चोवाच वराङ्गना । २
ततोऽग्निः उपयेमे ता शिवां प्रीतां मुदायुतः ।
प्रीत्या देवी समायुक्ता शुक्रं जग्राह पाणिना । ७
अचिन्तयत् ममेदं ये रूपम् द्रक्षन्ति कानने ।
ते ब्राह्मणीनाम् अनृतं दोषं वक्षन्ति पावके । ८
तस्मादेतत् रक्षमाना गरुड़ी सम्भवाम्यहं ।

वनान्निर्गमनञ्चैव सुखं मम भविष्यति । ९
सुपर्णी सा तदा भूत्वा निर्जगाम महावनात् ।
अपश्यत् पर्व्वतं श्वेतं शरस्तम्बैः सुसंवृतं । १०
प्राक्षिपत् काञ्चने कुण्डे शुक्रं सा त्वरिता शुभा । १२
सप्तानामपि सा देवी सप्तर्षीणां महात्मनां ।
पत्नी-स्वरूपतां कृत्वा वञ्चयामास पावकं । १३
दिव्यरूपमरुन्धत्याः कर्त्तुं न शकितं तया ।
तस्यास्तपःप्रभावेन भर्त्तुः शुश्रुषणेन च । १४
षट्कृत्यः तत्तु निक्षिप्तम् अग्नेः रेतः कुरूत्तम ।
तस्मिन् कुण्डे प्रतिपदि कामिन्या स्वाहया तदा । १५
तत् स्कन्नं तेजसा तत्र संवृतं जनयत् सुतं । १६
ऋषिभिः पूजितं स्कन्नम् तनयः स्कन्दतां गतः ।
षट्शिरा द्विगुण-श्रोत्रो द्वादशाक्षि भुजक्रमः ।
एक ग्रीवैक जठरः कुमारः समपद्यत । १७
अथ सप्तर्षयः श्रुत्वा जातं पुत्रं महोजसं ।
तत्यजुः षट् तदा पत्नीः विना देवीं अरुन्धतीं । ३ । २२५ । ८
गोब्राह्मणहितार्थाय सेनापत्येऽभिषिञ्च माम् । ३ २२८ । २२
सोऽभिषिक्तः मयवता सर्व्वदेवगणैः सह । २३
इति चिन्त्यानयामास देवसेनां स्वलङ्कृताम् । २२८ । ४५
एवमुक्तः स जग्राह तस्याः पाणिं यथाविधि । ४७ ।
सप्तर्षिपत्न्यः षड् देव्यः तत्सकाशम् अथागमन् । २२९ । १
वयं पुत्र परित्यक्ताः भर्त्तृभिः देवसन्निभैः ।
अकारणात् रुषा वै तु पुण्यस्थानात् परिच्युताः । ३ ।
अभिजित् स्पर्द्धमानातु रोहिण्या कन्यसीस्वसा ।
इच्छन्ती ज्येष्ठतां देवी तपस्तप्तुं वनं गता । ८ ।
एवं उक्ते न शक्रेन त्रिदिवं कृत्तिका गता
नक्षत्रं सप्तशीर्षाभं भाति तत् ब्रह्मदैवतं । ११
विनता चाब्रवीत् स्कन्दं मम त्वं पिण्डदः सुतः
इच्छामि नित्यमेवाहं त्वया पुत्रं सहोषितुम् । १२
स्नुषया पुज्यमाना वै देवि वत्स्यसि नित्यदा । १३

Of the other two stars of this group, one is Devasenā (देवसेना) and the other is called Vinatā (विनता), the mother of (गरुड़). *Devasenā* seems to be the largest star of the group. Vide

प्रधानांशस्वरूपाया देवसेना च नारद ।
मातृकासु पुज्यतमा सा च षष्ठी प्रकीर्त्तिता ॥
इति ब्रह्मवैवर्त्ते गणेशखण्डे ।

And we identify the star with star Alcyone of the Greeks *i.e.*, star 3 Vrishasya ($= \eta$ Tauri).

Vinatā, the mother of *Garuda* was allowed by *Kārttikeya* to live with *Devasenā* (*a*) (Gr. Alcyone), and we feel no hesitation in identifying the star with the star 22 of Vrisha (वृष), called Pleone in the west, when we remember that she was the mother of the bird Alcyone.

EXAMPLE III

NAKSHATRA MRIGA-SIRSHA (मृगशीर्ष नक्षत्र) IN MRIGA MANDALA (मृग मण्डल) THE CONSTELLATION ORION

The third Nakshatra of the Lunar Zodiac lies in Mriga, the Northern portion of which is included in the third division of the solar zodiac. It is called Mriga-Sirsha (मृगशीर्ष) and it consists of a group of three stars, the northernmost of which is the Yogatārā (योगतारा) or the head-star (*b*). The Suryya-Siddhānta gives its latitude 10° S and long. II.3°. The star indicated is the star 11 of Kālapurusha *i.e.*, λ Orionis, which with its two companion stars, forms the head of Orion. We thus get the equation :

Nakshatra Mriga-Sira = the head of Orion.

Now the question is, whether we have any Sanskrit name for the constellation Orion. Let us try to answer it.

With intent to create the animal kingdom,—we give the substance of what the Rig-veda says—Prajāpati (*Brahmā*) felt a passion for his own daughter. Vide

पिता यत् स्वाम् दुहितरम् अध्यिस्कन्. . ।

Rv. X. 61. 5-9.

The Aitareya Brāhmana says in explanation :

Prajāpati cast lustful eyes on his own daughter, whom some call Heaven, others Dawn. The latter is called *Ushā* or *Sarasvati* in the Vedas. He transformed himself into a buck

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(*a*) त्वया पूज्यमाना वै देवि वत्स्यसि नित्यदा ।

(*b*) विशाखा अश्विनि सौम्यानाम् योगतारा उत्तरा स्मृता ॥

S. S. VIII. 16.

(Risya—ऋश्य), whilst his daughter assumed the shape of a female deer (Rohit—रोहित्). He approached her. The Gods saw it, (crying), 'Prajāpati commits an act never done before.' In order to avoid the evil consequences of this, the gods enquired for some one who might destroy the evil. They then put the most fearful bodies of theirs in one. This aggregate of the most fearful bodies became a god, *Bhutavat* by name. The gods said to him, 'Pierce this.' So he did. He then said 'I will choose a boon from you'. They said 'choose'. He then chose as his boon sovereignty over cattle. That is the reason why his name is Pasumān (पशुमान्) *i.e.*, the Lord of Beasts. *Bhutavān* attacked him and pierced him with an arrow. After having been pierced he became a constellation. They call him (Prajāpati) Mriga (मृग) or deer, and him who killed, Mriga-vyādha (मृगव्याध), hunter of the deer. The female deer *Rohit*, into which *Prajāpati's* daughter had been transformed, became the asterism Rohini (रोहिणी).

The arrow, which had three parts, became such an arrow Trisandhi (त्रिसन्धि) or three-knotted.

Haug's Aitareya Brāhmana. III. 33.

प्रजापतिर्वै स्वाम् दुहितरम् अभ्यध्यायत् दिवम् (इति अन्ये आह्वः उपसम् इति अन्ये) तां ऋश्यः भूत्वा रोहितं भूतां अभ्यैत्। तं देवाः अपश्यन्। न कृतं वै प्रजापतिः करोति इति ते तं ऐच्छन् यः एनं मारिष्यति एतं अन्यः अन्यस्मिन् न अविन्दन् तेषां याः एव घोरतमा; तन्वः आसन् ताः एकधा समभरन् ताः संभृताः। एषः देवः भवत् तत् अस्यै तत् भूतवत् नाम भवति वै सः यः अस्यै तदेवं नाम वेद। तं देवा अब्रुवन्। अयं वै प्रजापतिः अकृतं अकरिमं विध्य इति स तथा इति अब्रवीत् स वै वः वरं वृणा इति वृणीष्व इति। स एतं एव वरं अवृणोत् पशूनां आधिपत्यं। तत् अस्यै तत् पशुमत् नाम पशुमान् भवति। यः अस्यै तदेव नाम वेद। तं अभ्यायत् या अविध्यत्स। विद्ध ऊर्द्ध उद प्रपततं एतं मृगः इति आचक्षते। यः उ एव मृगव्याधः सः उ एव सः। या रोहित् सा रोहिणी यः एव इषुः त्रिकाण्डा सः एव इषुः त्रिकाण्डा। इति ऐतरेय ब्राह्मणः। ३। ३३।

The Satapatha Brāhmana elucidates the matter in full. Sat. Br. II. 1. 2. declares :

"8. He may also set up his fires (under the asterism of) *Mriga-Sirsha*. For, *Mriga-Sirsha* indeed is the head of *Prajāpati*.

"9. On the other hand (it is argued), why one should not set up his fire under *Mriga-Sirsha*. The latter indeed is

Prajāpati's body. Now when they (the Gods) on that occasion pierced him with what is called the three-knotted arrow, he abandoned that body, for the body is a mere relic (or dwelling, bāstu) unholy and sapless. He should therefore not set up his fire under *Mriga-Sīrsha.*

"10. But he may nevertheless set them up under *Mriga-Sīrsha.* For assuredly, the body of that God Prajāpati, is neither a relic nor unholy" (Sacred Books of the East).

The above narrative gives us a good many of astronomical informations. The asterism *Mriga-Sirā* is then the head of the Heavenly Deer. Thus we come to the second equation :

Prajāpati = *Mriga* = Orion.

The constellation, we believe, is called Kālapurusha (कालपुरुष) in our astrological works.

The asterism *Mriga-Sīrsha* stands north of a stellar trapezium traversed in the middle by a row of three stars and interspersed by other stars and nebulæ. The constellation is surrounded by a balloon-shaped stellar environment. The whole is called the constellation Orion in the Western charts, and evidently the constellation is the Heavenly Deer called *Kālapurusha.* The four stars at the four angles of the trapezium may well represent the four hoofs of the Deer.

Thus we find, Orion = The Deer-shaped *Kālapurusha.* It is interesting to find that Orion met with a fate very similar to that of his Indian brother *Kālapurusha* (कालपुरुष). Orion fell in love with Merope, one of the stars in the Pleiades. At the instigation of her father, who had been much exasperated at his treatment of the maiden, Bacchus deprived him of his sight. After his death, Orion was placed among the stars.

Note—The only difference appears to lie in the objects of their love. In the case of *Kālapurusha* it was *Rohinī,* a star in the asterism Hyades, and in the case of Orion it was Merope in the Pleiades.

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EXAMPLE III (*a*)

NAKSHATRA ROHINI (रोहिणी नक्षत्र)

In the Vedic age Nakshatra *Rohinī* consisted of a single star. Vide

प्रजापतेः रोहिणी।

T. Br. I. 5.

प्रजापतये स्वाहा, रोहिण्यै स्वाहा।

T. Br. III. 1. 4. 2.

Latterly, four more stars were allotted to it, to give it the shape of a *sakata* (शकट) *i.e.*, a cart. The easternmost star of the group is the Yogatārā (योगतारा) of the Nakshatra. Vide

रोहिणी आदित्य मुलानाम् प्राची।

S. S. VIII. 19.

The S. Siddhānta places the *Yogatārā* at Lat. 5° S. and Long. I. 19° 30′ ; and Messrs. Colebrooke, Burgess and Bentley unanimously identify the star with *a* Tauri, called Aldebaran by the Semitics. This is star 1 of *Vrisha* of the Hindu astronomical charts. It is a star of the first magnitude and of deep yellow colour. From its colour, the Hindu astronomers must have bestowed the name of *Rohinī* on the star. Besides we may fairly presume that the *Yogatārās* have always remained the same since the Vedic age.

For both the reasons we hold that in the Vedic age, star 1 of Vrisha (= α Tauri) was the star that constituted the Nakshatra *Rohinī*. As the name *Rohinī* has been transferred from star 1 of Vrisha to the group itself, we propose to call star 1, Rohit (रोहित्).

For, the star represents the red-coloured she-deer called *Rohit*, of the Ait. Brāhmana. *Rohinī* represents the divine cow Suravi (सुरभि). Vide

रोहिणी सुरभिः देवी
अदितिः देवकी हि अभूत्। Hari-vamsa.

"Aldebaran" may be transliterated into *Haladdivarna*—(हलदी वर्ण) *i.e.*, the yellow-coloured.

EXAMPLE III (*b*)

MRIGA-VYADHA (मृगव्याध)

LUBDHAKA (लुब्धक)

We have shown that "Rishya (ऋष्य) *i.e.*, the he-deer of the A. Br" = the constellation Orion, and that "the she-deer of the A. Br" = asterism *Rohinī*. It follows as a matter of course that the Mriga-vyādha Pasumān (मृगव्याध पशुमान्) of the Aitareya Brāhmana must be some heavenly body. Now let us see what heavenly body represents it. The S. Siddhānta places *Mriga-vyādha* at Lat 40° S. and Long. II. 20°. Vide

विंशे च मिथुनस्य अंशे मृगव्याधः व्यवस्थितः
विक्षेपः दक्षिणे भागैः ख–अर्णवैः स्यात् अपक्रमात् । S. S. VIII 10-11.

And the acute Raṅganātha in his commentary says that the whole constellation *Mriga-vyādha* is compressed here into a star, the star *Lubdhaka*. Vide

मृगव्याधः लुब्धकः मिथुनराशेः विंशति–भागे स्थितः । इति रङ्गनाथः ।

Messrs. Colebrooke, Burgess and Bentley all agree in identifying the star indicated, with star α Canis Majoris, called *Sirius* = star 1 of *Mriga-vyādha* = *Lubdhaka* of the Hindu charts.

We therefore hold on the authority of Raṅganātha, that *Mriga-vyādha* is the name of a constellation in which the star *Lubdhaka* is situated.

Nor was the Siddhānta unique in compressing a constellation into a star. "But, although in Homer," says Brown, 'Kuon' = the dog = Sirius, *i.e.*, a particular star, yet considering all the facts, I strongly incline to the opinion that the Homeric 'Kuon' is also a constellation, one of the (*gr.*) Teirea. The words signifying 'stars' and 'constellation' are used so loosely and so interchangeably that the sense has to be gathered more from the context and general consideration than from the particular term employed, as if the great star were a compression of the constellation and the constellation an expansion of the star."

R. Brown. I. 278, 285.

We therefore get the equation :

Mriga-vyādha = the constellation Canis Major, and *Lubdhaka* = the star *Sirius*.

EXAMPLE III (*c*)

ISHU TRIKANDA (इषु त्रिकाण्ड)

i.e., The arrow with three parts.

We have now to find out, what represents in heaven the '*Ishu Trikānda*' of the Ait. Brāhmana.

We know that an arrow made of stars should consist of three stars lying in a straight line, as in the cases of the arrow-shaped asterisms Pushyā (पुष्या) and Sravanā (श्रवणा). The *Ishu Trikānda* or the arrow with three parts requires three such stars and this stellar arrow should be in such a position that shot from the direction of the *Mriga-vyādha-Lubdhaka* it would hit both the Heavenly *Prajāpati Deer* and the Nakshatra *Rohinī-Rohit*. The question then is, have we any such stellar arrow in heaven? We find that there is such an *Ishu Trikānda* in heaven. The three stars in the belt of Orion represent, we believe, the *Ishu Trikānda* of the Ait. Brāhmana. That these three stars alone could be meant by the *Ishu Trikānda* will appear pretty clear even to an indifferent observer of the heavens, who cannot fail to discover that the stars *Lubdhaka* (Sirius) and *Haladdivarna* (Aldebaran) are in a line with the three stars concerned, that stand across the navel of the heavenly deer. We have therefore the equation: *Ishu Trikānda* = the belt of Orion.

EXAMPLE IV

SVAN (श्वन्)

The star Sirius of the later Greeks was the star Cyon (= dog) of Homer (*a*). Was the star *Lubdhaka*, then, the Svan (श्वन्), *i.e.*, dog, or Divya-Svan (दिव्यश्वन्), *i.e.*, the Heavenly dog of the Vedas? We believe it was.

That *Divya-Svan* is a heavenly luminary will appear pretty clear from the following passages of the Vedas:

Atharva Veda VI. 80.

1. He fleets in the firmament observing all the things, that be. We with this offering will adore the greatness of the Heavenly Hound.

2. The three, the *Kālakānjas* set aloft in heaven as they were gods. All these I call to be our help and keep this man secure from harm.

3. In waters is thy birth, in heaven thy station, thy majesty on earth and in the ocean. We with this offering will adore the greatness of the Heavenly Hound.

Prof. Griffith.

१। अन्तरिक्षे पतति विश्वः भूताः अवचकाशत्
शूनः दिव्यस्य यत्तु महः तेन ते हविषा विधेम ।
२। ये त्रयः कालकाञ्जाः दिवि देवाः इवश्रिताः
तान् सर्व्वान् अह्वे उभये अस्मै अरिष्ट तातये ।
३। अप्सु ते जन्म दिवि ते सधस्थ्यं समुद्र अन्त महिमा ते पृथिव्याम् ।
शुनो दिव्यस्य यत् महः तेन ते हविषा विधेम ।

Av. VI. 80.

That the Vedic Rishis felt scorching heat on the appearance, technically called the heliacal rising, of the Heavenly Hound or its tooth-star is obvious from the following passages, though written in a figurative language:

When O' bright son of Saramā !
Thou showest thy tawny tooth,
It gleams like lancer's point within thy mouth,
When thou wouldst bite ; go thou to sleep.

Vide

Rv. VII. 55. 2.

यत् अर्ज्जुन सारमेय दतः पिशङ्ग यच्छसे
विऽ इव भ्राजन्ते ऋष्टयः उपस्रक्केषु वपसतो नि सुखप ।
ऋ: वे : ७.५५.२.

Compare, what Aratos says of Canis-major and its tooth-star Sirius (literally, the scorcher).

......His portentious jaw
Bears at the end a star which scorches most,
Resplendent; so men it the Scorcher call.
Phainomena 582-5.

We have thus the equations :
Star *Lubdhaka* = Star Danta (दन्त), and
Tārā Mandala *Mriga-vyādha* = the constellation Svan (श्वन्).

EXAMPLE V

SARAMA (सरमा)

Deva-Suni Saramā (सरमा) of the Vedas may well be identified with star Procyon of the Greeks. No doubt we are the first to make the suggestion, but we have very strong reasons for doing so.

The Greek name *Saramā* is Maira (the Sparkler) (=Lat. Mera) as well as Procyon (one who rises heliacally before the Cyon or Sirius=the Dog).

The grounds for identification are strong and varied and it is desirable to give them here in detail, as the point is not beyond the pale of all honest controversy.

The name of *Saramā* implies, one who moves (swiftly). Her other name Deva-Suni (देवशुनी) means Dog of the gods. She is the primeval parent of the canine species. Every dog therefore bears the patronymic Sārameya (सारमेय) in Sanskrit.

The Hindu cosmogony recognises threefold creation.

(1) The Ādhyātmic (आध्यात्मिक) or Metaphysical.

(2) The Ādhidaivic (आधिदैविक) or Heavenly.

(3) The Ādhibhautic (आधिभौतिक) or Terrestrial.

As to the second, Prajāpati, says the Taittiriya Brāhmana, created all animals and each of them occupied a star. Vide

प्रजापतिः पशून् असृजत
ते नक्षत्रं नक्षत्रं उपातिष्ठत् ।

T. Br. I. 5. 4.

Of these primeval animals, Airāvata (ऐरावत), Uchchaisravās (उच्चैश्रवाः) and Saramā (सरमा) fell to the share of *Indra*, the Bull (वृष) and the Dog (श्वन्) fell to the share of *Siva*, and Aquila, *i.e.*, Garuda (गरुड़) to the share of *Vishnu*, and Capricorn, *i.e.*, Makara (मकर) to the share of the Heavenly Gaṅgā (आकाश गङ्गा).

It will not be out of place here to observe that the Greek philosopher Platon calls the fixed stars 'divine and eternal animals'.

These theories may be well connected with the naming of the constellations after animals, both in the East and in the West.

It follows therefore, that Saramā (सरमा) the primeval dog, is a denizen of the starry sphere, if she herself is not a star or a collection of stars. The characteristics of *Saramā* as found in the Vedas, can be attributed only to an Ārdrā (आर्द्रा) the rain-giving star (*a*). We can give here the substance of the Vedic literature dwelling on the point.

Indra the rain-god, or the Sun as rain-giver, has to rescue the fertilising cattle (rains) breaking open the dark prison (clouds) in which they are kept in secret confinement by Panis (पणि), the agents of *Vritra*. Like a true sportsman, he has for his help-mate, the dog *Saramā*, who shows herself to run ahead of him (*i.e.*, rises before the Sun) in search of them (Vide, Rv. IV. 16. 8), crosses the Rasā (रसा) to track the stolen cows to their place of confinement (Vide, Rv. X. 108. 8. 3) (*b*), and finds them out to convey the *khabar* (news), as the sportsmen say, to her great master (Vide, Rv. V. 45, 1-8). It is she again, who finally in the flood's van leads them forth (Vide, Rv. III. 31.6).

In the Vedas, mention is made of three Sārameyas (सारमेय) or the offsprings of *Saramā*. One of them, as we have shown, is her great son, the Heavenly *Svān* (श्वान) or the Dog (Vide, Rv. VII. 55. 2 ; Av. VI. 80. 1-3). The second and the third form the twins 'Syāma-Savalau' (श्याम–शर्वलौ) or the stars *Shauláh* and *Lesath*, constituting the Nakshatra Vichritau (विचृतौ), called Mulā (मूला) in astronomical works, and guarding the path to *Yama's* abode. Vide :

Rv. X. 14, 10-11.
Av. XVIII. 2, 10-11.
Tait Sam. IV. 4, 10-12.
Tait Ar. II. 6. 1.

Nor is the Paurānic *Saramā* unconnected with the sidereal sphere. For she is said to be a daughter of Prajāpati Daksha

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(*a*) The stars Sirius and Procyon were Bāhu (बाहू) literally the two arms, *i.e.*, helpers of *Indra* and they together formed *Nakshatra Ārdrā* in the early Vedic period. Vide :

अग्ने: कृत्तिका: प्रजापते: रोहिणी
सोमस्य इन्वका: रुद्रस्य बाहु। T. Br. I. 5. 1.

(*b*) तथा रसाया: अतरं पयांसि। Rv. X. 108. 2.

(दत्त), father of the 27 Nakshatras married to the Moon. The Mahābhārata assigns her the status of a *Graha* (ग्रह), *i.e.*, a heavenly body of evil disposition. Vide :

सरमा नाम या माता शूनां देवी जनाधिप !
वनपर्व, २२९।३३
इमे तु अष्टादशा अन्ये वै ग्रहाः मांसमधुप्रियाः ।
वनपर्व २२९।३६

A careful consideration of all these fairly raises a strong presumption in favour of the first portion of the proposition laid down above, namely that *Saramā* is a star and is identical with Procyon.

All that now remains is to establish the identity of *Saramā*, mother of the canine species, with Procyon (= the leader of the pack).

In the Vedas, as we have already observed, *Saramā* is said to have crossed the *Rasā*, a mythical river that encompasses both the heavens and the earth.

Rv. X. 108, 1-2.

In the Avesta the same river is called *Ranghā* (रंघा). And we feel no difficulty in identifying it with the great celestial river, *i.e.*, the Milky Way. We are thus told to look for *Saramā* on the banks of the Heavenly *Gaṅgā*. We know that her great son, the Dog, lies on the western bank of it and we may fairly conclude that she was supposed to have started from some point close to her son, in crossing over to the eastern bank of the great stream which now lies between her and her son. It is to be remembered that Procyon also lies to the east of the Milky Way. But the eastern bank has a world-wide circuit. So the two stars *Saramā* and Procyon may lie like Poles asunder. *Saramā*, says the Mahābhārata, followed Skanda (स्कन्द), the celestial Generalissimo in his march. *Skanda*, we know, is figured in the Constellation Orion, also called *Kandaon* (the prince) by the Boiotians. Thus we can trace the star *Saramā* to that part of the Heavens, where Procyon lies, a little way off to the east of Orion and beyond the Milky Way. The Hindu guides stop here and fail to lead us exactly to the goal. But foreign help is not wanting, and with which we hope to reaeh

our destination. By the early Semitic Astronomers of the Euphratean Valley, Procyon was called *Kakkab Palura* or 'the crossing-of-the-water-dog,' who was supposed to have crossed 'the Great Stream', as the Egyptians called the Milky Way (Vide, Renouf, the Egyptian Book of the Dead, Part III., p.139).

In the Euphratean name of Procyon, we find a vivid image of *Saramā* crossing the Rasā (रसा). An ancient tablet figured by Schliemann, shows a part of the Milky Way (not Scorpion, we suppose) in the centre, a dog (male) on one side and a dog (female) on the other. The latter stands for *Kakkab Palura*, *i.e.*, the star *Saramā*. Lastly, ancient western astronomers speak of no other Dog on that side of the Milky Way and we have no reason to suspect that the Vedic Rishi had located his *Saramā* elsewhere. Procyon lies 27° east of the present solstitial colure. Astronomical consideration would therefore lead us to the conclusion that the star enjoyed the honour of being an Ārdrā (आर्द्रा) or the rain-giving star in a very remote age.

In conclusion, it is but fair to mention that Professor Max Muller finds a remnant of the Vedic *Saramā* in the name of *Helenā*. But we submit with the deepest respect for his vast oriental scholarship that irrespective of philological affinity, *Saramā*, the messenger of the celestial King *Indra*, is closely allied to Hermes, the messenger of the Greek Zeus. Elsewhere he himself highly approves the Kuhn's discovery :—*Hermeias* (sons of *Hermes*) = *Sārameyas* (sons of *Saramā*). It follows, therefore, as a matter of course, that *Hermes* = *Saramā*. It would have been more satisfactory if Helenā, the Greek sister of Suryyā (सूर्य्या), the daughter of the Sun (Sk. *Heli*), could be connected with the Sun (Gr. *Helios*).

We have therefore the equation :

The Star Procyon = *Saramā*.

Since the star *Saramā* had to come down to the *Asura-bhāga* of the heavens, she has been regarded as a demon in the Purānas. In Krittivāsa's Rāmāyana, she appears as the wife of Vibhishana (विभीषण), attending on Sitā (सीता).

EXAMPLE VI

SARAMEYA-JUGALA (सारमेय युगल)

There is a constellation in the Western charts, invented by astronomer Hevelius in A.D. 1690, which is called Canis Venatici or the two grey-hounds. The constellation lies far to the north of the star Chitrā (चित्रा) *i.e.*, the star Spica of the Western charts.

There is a narrative, in the Vedas about a clan of *Asuras* called *Kālakāñjas*. They built up a fire-altar called Rauhina (रौहिण), to ascend the heavens. On the fall of *Rauhina* (stair-way), two of them flew up to the heavens in the shape of dogs from the vicinity of the star Chitrā (चित्रा). It was *Indra*, the thunderer, who rent *Rauhina* into pieces when scaling the heavens. Vide :

य: रौहिणं अस्फुरत् वज्रबाहु: द्यां आरोहन्तम् ।

Rv. II. 12. 12.

An explanation of the above allusion, we find in the Satapatha Brāhmana II. 1. 2. 13-17.

13. Now the gods and the Asuras, both of them sprung from *Prajāpati*, were contending for superiority. Both parties were desirous of rising to yonder sky. The Asuras then constructed the fire-altar called Rauhina (रौहिण) (*i.e.*, fit to ascend by) thinking thereby 'we shall ascend to that sky'.

14. *Indra* then considered, 'if they constructed that fire-altar, they will certainly prevail over us'. He secured a brick and proceeded thither, passing himself off for a Brahmin.

15. 'Hark ye', said he, 'I will too put on this brick for myself.' 'Very well' they replied. He put it on. The fire-altar wanted but very little to be completely built up, when he said, 'I will take back this brick, which belongs to me'. He took hold of it and pulled it out, and on its being pulled out, the fire-altar fell down, and along with the falling fire-altar, the Asuras fell down. He then converted the bricks into thunder-bolts and clove the *Asuras*' necks.

17. Thereupon the gods assembled and said '*Chitram* (चित्रं), wonderful it has proceeded with us who have slain so many

(Asuras) enemies'. Hence the *Chitratvam* (चित्रत्वं), *i.e.*, the wonderful nature of the Nakshatra *Chitrā* (चित्रानक्षत्र) (*i.e.*, the star Spica).

The Brāhmana says later on, that the *Asuras* were deprived of speech by the *Devas*. Vide, S. Br. III. 2. 1. 2-3. This is based on Rv. I. 130. 9, where *Indra* is said to have deprived the *Asuras* of their speech. Vide.

वाचम् अरुणः मुपायति

As the object of all the Brāhmanas and Upanishads, Tantras and Purānas is simply to explain the Vedas, the Taittiriya Brāhmana takes up the string and declares :

There were *Asuras*, the *Kālakānjas* (कालकाञ्ज). They constructed a fire-altar with a view to gaining the world of heaven. They, every man of them, put a brick to it. *Indra* passing himself off for a Brahmin put a brick on for himself saying, 'this one *Chitrā* (चित्रा) (the star Spica) by name is for me.' They climbed up to heaven. Indra, however, pulled out his brick, and they tumbled down and became spiders. Two of them flew up (to heaven) and they became the two Heavenly Dogs (*i.e.*, Canis Venatici).

Tait. Br. I. 1. 2. 4-6.

कालकाञ्जाः वै नाम असुराः आसन् । ते सुवर्गाय लोकाय अग्निं अचिन्वत । पुरुषः इष्टकां उपादधात् । पुरुषः उ इष्टकां सः इन्द्रः ब्राह्मणः ब्रुवाणः इष्टकां उपाधत । एषा मे चित्रा नाम इति । ते सुवर्गलोकं आप्रारोहण् सः इन्द्रः इष्टकां आवृहत् ते वा आकीर्य्यन्त । ये वा अकीर्य्यन्त ते ऊर्णनाभयः अभवन् । द्वौ उदपततां । तौ दिव्यौ श्वानौ अभवताम् ।

तैः ब्राः १. १. २. ४-६

Now we find in the heavens, as we observed before, two stars a little way off to the north of the *Nakshatra Chitrā*, in a constellation called Canis Venatici or 'the Two Hounds' in the western astronomical charts. The Vedic narrative very likely refers to this constellation. And we identify the two Hounds with the two *Kālakānjas* who flew up to heaven in the shape of dogs. And the *Rauhina-fire-altar* seems to be the Tower of Babel referred to in the Genesis of the Holy Bible. The Holy Bible has the same traditional story in it. Vide, Genesis XI.

1. And the whole earth was of one language and of one speech.

2. And it came to pass, as they journeyed from the east, that they found a plain in the land of Shinar and they dwelt there.

3. And they said one to another, go to, let us make bricks and burn them thoroughly. And they had brick for stone and lime they had for mortar.

4. And they said, go to, let us build us a city and a tower whose top may reach unto heaven and let us make a name, lest we be scattered abroad upon the face of the whole earth.

5. And the Lord came down to see the city and the tower which the children of men builded.

6. And the Lord said, behold the people is one and they have all one language, and this they begin to do, and now nothing will be restrained from them which they have imagined to do.

7. Go to, let us go down and there confound their languages, that they may not understand one another's speech.

8. So the Lord scattered them abroad from thence upon the face of all the earth, and they left off to build the city.

9. Therefore is the name of it called Babel, because the Lord did there confound the language of all the earth and from thence did the Lord scatter them abroad upon the face of all the earth.

Krittivāsa, the author of the Bengalee Rāmāyana, alludes to this anecdote. It is said there, that the *Asura Rāvana*, king of *Lankā*, in his death-bed expressed his regret in not having built in his better days, a *Rauhina* (रौहिण), *i.e.*, staircase for the sinners to mount the heaven. The myth is given in Homer's Odyssey XI. 305-325. Oto and Aphialtes in order to fight the immortal gods, piled Ossa on Olympus and Pelion on Ossa ; and they were destroyed by Apollo.

We have thus the equation :

Canis Venatici = the two *Kālakānjas*.

From what source Astronomer Hevelius, so far back as A.D. 1690, got access to the narrative of the Taittiriya Brāhmana, that led him to invent the constellation Canis Venatici with the two Hounds, is more than what we can tell at present.

EXAMPLE VII

BHUTESA MANDALA. (भूतेश मण्डल)

Sum. Ak. *Sib-zianna*, Gr. *Bootes*,

Sem. *Al-ramih*

To the north of the constellation *Kanyā* (कन्या) or Virgo lies a very important constellation, which, we think, represents the Sun-God *Siva-Bhutesa*. In this we are not actuated in the least by linguistic affinity.

The constellation is called *Nakshatra Svāti* (स्वाति), which means a sword. It is also called Nishthya (निष्ठ्य), son of Nishthi (निष्ठि) or Diti (दिति) *i.e.*, Chaos. We know this Nakshatra has many stars ; but the exact number of stars the Nakshatra includes, we have no means to ascertain now. Vide :

यथा प्रत्यवशेषाणाम् स्थूला स्यात् योगतारका ।

S. S. VIII. 19.

प्रत्यवशेषाणाम् अवशिष्ट नक्षत्राणाम् आर्द्राचित्रा-स्वाति-अभिजित्-शततारागाम स्वतारासु या अत्यन्तं स्थूला महती सा योगतारा स्यात् । इति

Raṅganātha.

Modern Hindu astronomers have reduced the number of stars of the Nakshatra to a single one. Vide :

कुङ्कुमारुणतर-एकतारके
वायुभे सुदति मौलिम् आगते ।

Kālidāsa.

So we must call the constellation by some name or other, and we suggest the name *Siva-Bhutesa*.

Visvāmītra, says the venerable bard of Vithoor, created a counter-set of the Saptarshi Mandala and the Nakshatras, as well as another host of stars for the southern celestial hemisphere called *Asura-bhāga*, as opposed to the northern celestial hemisphere called the *Deva-bhāga*, which was created by *Brahmā*.

The statement was no idle talk coming out of simple imagination and excepting the existence of the traditional *Angra-Mainyu* of *India*, every word of *Vālmiki* can be verified by a

close comparison of the two hemispheres, the *Deva-bhāga* and the *Asura-bhāga*. In fact, comparison shows that the stars and the constellations of the north are reduplicated in the south.

(1) We have Saumya-Dhruva (सौम्य ध्रुव) in the north and Yāmya-Dhruva (याम्य ध्रुव) in the south. *Vide*. S. Siddhānta. XII. 43.

मेरोः उभयतः मध्ये ध्रुवतारे नभः स्थिते ।

(2) We have the *Chitra-Sikhandi Mandala* (*Saptarshis* = सप्तर्षिः) literally 'the Peacock Constellation' in the north, and the *Mayura Mandala* (मयूर मण्डल) (*Saptarshis*) or the Constellation Pavo in the south.

(3) We have the *Mriga Mandala* (Heavenly deer) (usually called the *Kālapurusha Mandala*) or Orion in the north and the *Mriga-asya* or the Deer-headed *Makara* (Capricorn) in the south.

(4) We have the asterism *Rohinī* (रोहिणी) in the north, and the asterism *Rohinī*, now called Jyesthā (ज्येष्ठा) in the south.

(5) We have the asterism *Visākha* (विशाख) or Betelgeux (β Orionis), astronomically called Ārdrā (आर्द्रा) in the north and the asterism *Visākhā* (विशाखा) (α and β Libræ) in the south.

6. We have the twins Asvinau (अश्विनौ) (α and β Geminorum) in the north, and the twins *Vichritau* (विचृतौ) (λ and ν Scorpionis) in the south.

(7) We have Vāna Mandala (वाण मण्डल) or Sagitta in the north and the asterism Pāsupat Vāna (पाशुपत वाण) (*i.e.*, the belt of Orion) in the south.

(8) It is needless to multiply instances in support of the statement of so high an authority as *Vālmiki*. Suffice it to say, that we have the northern *Brahma Mandala* reduplicated in the *Kālapurusha Mandala* in the south.

We have a *Bhutavat-Pasumān* in Mriga-vyādha Mandala with a bluish-white star *Lubdhaka* (Sirius) in the south. As *Siva* is called Nila-lohita (नीललोहित), *i.e.*, Blue-Red, we are sure to have his original in the north, with a red star in it. For, without a *Bhutanāth Pasupati* clad in a red star in the north, the *Pasumān* clad in the bluish-white star *Lubdhaka*, cannot form the complete Nila-lohita (नीललोहित), *i.e.*, Siva (शिव). The question now resolves itself into a simple one of identification.

Nakshatra Svāti or *Nishthyā*, we know, has Vāyu Deva (वायुदेव) or Wind for its presiding deity. He bears a sword and is born of Nishthi (निष्ठि) *i.e.*, Chaos or Darkness. Who can represent such a deity save and except the Sun-God *Siva-Bhutesa* ? If further proof is necessary in support of our position, we may say that we have an overwhelming mass of strong evidence in store.

We know, *Siva Bhutesa* as Sarva (सर्व्व), *i.e.*, Darkness, holds a *sula* (शूल) or a spear in his hand, and as Pasupati (पशुपति) or the shepherd, a beast in his hands (*a*); as *Vāyu-deva* he is *Ugra* (उग्र), *i.e.*, the terrible ; as Soma (सोम), *i.e.*, the Moon, he is Mahā-deva (महादेव) ; as Jala-deva (जलदेव) or water-deity he is the Bhava (भव) ; and lastly he is *Mridha* (मृढ़) or the joyful and Bhairava (भैरव) or the shouter.

In the Euphratean astro-theogony, constellation "*Sib-zi-anna*," we are told, was 'the Shepherd God of Heaven' and 'the King of Night', *i.e.*, the Moon and he was connected with the great Wind. And lastly Euph. *Sib* water.

And in that constellation the star *Papsukala* was a Falchion (sword), a weapon in the hands of *Merodakh* (मृढ़ ?)

The Euphrateans had another *Sib-zi-anna* in the south. In Greece, the constellation Bootes was a shepherd and Bear-ward or the Guard of the Great Bear (*Saptarshis*).

In Rome he was a Shouter and a Lanceator.

In the Greek myth, Bootes was called a friend of Dionysos and the father of Erigone. Ikarius, alias Bootes, having introduced wine in the country, was killed by some shepherds who fancied they were poisoned. Erigone, conducted to his grave by his faithful dog *Maira*, hanged herself, and the three were translated to heaven as the three stars Bootes, Virgin (कन्या) and Procyon (Sk. *Saramā*).

The myth indicates the close connection between *Kanyā* (Virgo) and Bootes.

In Arabia they call it *Al-auwa* (=shouter), *Al-hakhar* (=herdsman), *Al-ramih* (=Lanceator), and *Haris-al-semak* (=guardian of heaven).

(*a*) परशु मृगवराभीति हस्तं प्रसन्नम्। इति शिवध्यान।

Leaving aside the linguistic affinity between the names *Siva-Bhutesa* and *Sib-zi-anna-Bootes* out of all considerations, the internal evidence found in the characteristics of *Sib-zi-anna-Bootes* and in the close relations between Bootes-Virgin and Bootes-Great-Bear, naturally reminds one of *Siva-Bhutesa*, the husband of *Kumārī* (कुमारी) the *Virgin*, and the disciple of Rishi Angiras (अङ्गिरा) in the Saptarshi Mandala ; and makes him unwittingly look to *Sib-zi-anna* and *Bootes* as Variants of their grand original prototype, the great *Siva-Bhutesa* of Hindu Theogony.

EXAMPLE VIII

BHISHMA (भीष्म)

Now we take a Solar Hero for the purpose of illustrating our standpoint. We mean the great hero Deva-vrata (देवव्रत) surnamed Bhisma-Deva (भीष्मदेव), of Mahābhārata. Aditi (अदिति), says the Veda, gave birth to eight sons. With seven she went up to heaven and cast away the eighth, Mārtanda (मार्त्तण्ड), *i.e.*, the Sun, there, *i.e.*, in the sky. Vide :

अष्टौ पुत्रासः अदितेः ये जाताः तन्वः परि
देवान् उपप्र ऐत् सप्तभिः परा मार्त्ताण्डम् आस्यत् ।

Rv. X. 72. 8.

These eight sons, says the Great Scholiast, are Mitra (मित्र), Varuna (वरुण), Dhātri (धातृ), Aryaman (अर्य्यमन्), Amsa (अंश), Vaga (भग), Vivasvān (विवस्वान्) and Āditya (आदित्य).

The heavenly *Gaṅgā*, says the *Mahābhārata*, gave birth to eight *Vasus*. Seven she took away one by one and the eighth one called Devavrata (देवव्रत) or Mahā-vrata (महाव्रत), she left to his father. Vide :

अथ एनाम् अष्टमे पुत्रे जाते ।

Mahā. I. 98. 15.

अहं गङ्गा जह्नुसुता महर्षिगणसेविता ।
अष्टौ ये वसवः देवाः महाभागाः महायशः ।
तेषाम् च जननी हेतोः मानुषत्वम् उपगता ।
स्वस्ति ते अस्तु गमिष्यामि पुत्रम् पाहि महाव्रतम् ।

Mahā. I. 100.

The *Vasus* are : *Dhava*, *Dhruva*, *Soma*, *Vishnu*, *Anila*, *Anala*, *Pratyusha* and *Pravāsha*. Vide :

धवः ध्रुवः च सोमः च विष्णुः च अनिलः अनलः ।
प्रत्युषः च प्रभाषः च अष्ट एते वसवः स्मृताः ।

Bharata.

The eighth *Vasu*, *Prabhāsha* or *Dyau* is the Day, *i.e.*, the Sun, who was cursed to live for ever in this world. Vide :

द्यौः राजन् मानुषे लोके चिरम् वत्स्यति भारत ।

Mahā. I. 99. 44.

Thus *Mārtanda* was the eighth son of Aditi (Milky Way), and *Bhishma* was the eighth son of Heavenly *Gaṅgā*, *i.e.*, the Milky Way.

In the famous Graha-yoga (ग्रहयोग) or great combination called the *Kurukshetra Yoga*, which ushered in the *Kali-yuga*, the Sun had to take a prominent part. (*a*).

Hindu astrology attributes to *Āditya-Mārtanda* extreme power for ten days.

सूर्य्यात् उच्चान् क्रियवृष मृग स्त्री कुलीर अन्त्ययूके ।
दिक् वह्नि इन्द्रद्वय तिथि शरान् पञ्चविंशान् च विंशान् ।
अंशान् एतान् वदति यवनः च अन्त्य तुङ्गान् सुतुङ्गान् ।
भान् एव अंशान् मदनभवने सुआह नीचान् सुनीचान् ।

इति दीपिका

In the war of *Kurukshetra* (*b*), *Bhishma* became the leader of the *Kaurava* army, and he fought for the first ten days only. Vide :

दशाहानि ततः तप्त्वा भीष्मः पाण्डववाहिनीम्
निरविद्यत धर्म्मात्मा जीवितेन परन्तप ।

Mahā. VI. 116. 10.

The Sun appears with its ten-thousand rays. *Bhishma* was backed by the ten-thousand Solar-troops called the Nārāyani Senā (नारायणी सेना). The setting Sun kills ten-thousand *Rākshasas* every evening. Vide :

(*a*) In this *yoga*, three *Tithis* (तिथि), three *Nakshatras* and three Yogas take place in one day. Vide :

एकस्मिन् सावनदिने तिथित्रय नक्षत्रत्रय योगत्रयानाम् स्पर्शः । इति स्मृतिः ।

(*b*) Literally meaning the 'High field'.

4

हिरण्यहस्तः असुरः सुनीथः सुमृलीकः स्ववान्यातु अर्वाङ्।
अपसेधन् रक्षसः यातुधानान् अस्थात् देवः प्रतिदोषम् गृणानः
Rv. I. 35. 10.

Vide also :—

सन्ध्याकालेतु संप्राप्ते रौद्रे परमदारुणे
मन्देहाः राक्षसाः घोराः सूर्य्यम् इच्छन्ति खादितुम्
प्रजापति कृतः शापः तेषां मैत्रेय रक्षसाम्।
अक्षयत्वम् शरीराणाम् मरणञ्च दिने दिने।
V.P. II. 8. 45-46

Vide also :—

अव द्रप्सः अंशुमतीम् अतिष्ठत् इयानः कृष्णः दशभिः सहस्रैः
आवत् तम् इन्द्रः शच्या धमन्तम् अप स्नेहितीः नृमनाः अधत्त।
Rv. VIII. 85.13.

And *Bhishma* kills ten-thousand strong every evening. Vide :

तस्मात् योधान् हनिष्यामि प्रयोगेन अयुतम् सदा।
Mahā. V. 156. 21.

Indra snatched away a wheel from *Surya's* Chariot.

मुषाय सूर्य्यम् कवे चक्रम् ईशानः ओजसा।
Vide, Rv. I. 175. 4.

Krishna attacked *Bhishma* with his discus. Vide :

ततः सुनाभम् वसुदेवपुत्रः सूर्य्यप्रभम् वज्रसहस्रतुल्यम्।
क्षुरान्तम् उद्भ्राम्य भुजेन चक्रम् रथात् अवप्लुत्य विसृज्य वाहान्।
सङ्कम्पयन् गाम् च चरणैः महात्मा वेगेन कृष्णः प्रससार भीष्मम्॥
Mahā. VI. 59. 88-89.

During the period in which the war took place, the Rishi-rekhā (ऋषिरेखा), *i.e.*, the solstitial colure (originally discovered) passed through the *Nakshatra Maghā* (a), which lies below the constellation of the Seven Rishis (सप्तर्षि). This constellation is called the Chitra Sikhandi Mandala (चित्र शिखण्डि मण्डल), lit. 'the Peacock'. The Sun is the Vatsa-Vaskya (वत्स वस्कय) or the yearly calf. Born in the beginning of the year on the first day of its northing, the Sun grows more and more powerful every day, till it crosses the point called the summer solstice, where

(a) When King *Yudhishthira*, says *Varāha*, ruled the earth, *the Munis* were in *Maghā*. Colebrooke.

the solstitial colure cuts the ecliptic, and enters in its southing. During its southern declension the Sun begins to wane gradually for a period of six months, at the end of which it gets a fresh lease of life. Vide :

द्वे अयने वर्ष संज्ञितम् । V.P. II. 8. 65.

Therefore the Sun had to begin to wane, in the course of this war, after having crossed the *Nakshatra Maghā* below the constellation Chitra-Sikhandi and in front of the *Nakshatra Arjuni* (अजुनि), also called Phalguni (फल्गुनी).

Bhishma Deva gives up the fight at the sight of Prince *Sikhandi* (lit. the peacock), who was a female before (*a*), throws away his weapons and succumbs to the prowess of *Arjuna*, the hero of the Epic. Vide :

अर्ज्जुनः समरे शूरः पुरस्कृत्य शिखण्डिनम् ।
मामेव विशिखैः तीक्ष्णैः अभिद्रवतु दंशितः ॥
अमङ्गल्य ध्वजे तस्मिन् स्त्री पूर्व्वं च विशेपतः ।
न प्रहर्त्तुम् अभीप्स्यामि गृहीतेपु कथञ्चन ॥

Mahā. VI. 108. 82 83.

The Sun sets every evening and dies to be born the next day. Vide :

अद्य ममार सः ह्यः सम् आन ।

Rv. X. 55. 5.

Bhishma falls in the evening to die. Vide:

सायाह्ने निहितः भूमौ ।

Mahā. VI. 120, 7.

The Sun draws water rising high in the shape of vapours and drinks it with his foot (rays). Vide:

विवस्वान् अंशुभिः तीक्ष्णैः आदाय जगतः जलम् ।

V.P. II. 9. 9.

उदकम् पदापुः ।

Av. IX. 9. 5.

Bhisma drinks water flowing upward from beneath the earth, pierced by Arjuna with an arrow, which is represented by the

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(*a*) The seven pea-hens. Vide: सप्त मयर्य्यः । Rv. I.191.14.

constellation Vāna (वाण), *i.e.*, the constellation Sagitta of the West. And it is curious to observe that the water resembled ambrosia flowing in the Milky Way (*a*). Vide:

अविध्यत् पृथिवीम् पार्थः पार्श्वे भीष्मस्य दक्षिणे ।
उत्पपात ततः धारा वारिणी विमला शुभा ।
शीतस्य अमृतकल्पस्य दिव्य गन्ध रसस्य च ।
अतर्पयत् ततः पार्थः शीतया जलधारया ।।

Mahā. VI. 123, 23-25.

His (arrow-like) rays bear the Sun up aloft. Vide:

उत् उ त्यम् जातवेदसम् देवम् वहन्ति केतवः दृशे विश्वाय सूर्य्यम् ।

Av. XX. 47. 13 ; Rv. I. 50. 1.

Bhishma lies on a bed of arrows (शरशय्या). Vide:

सः शेते शरतल्पस्थः मेदिनीम् अस्पृशन् त्वचा ।।

Mahā. VI. 121, 8

The Yearly Calf finishes its annual course at the end of its southing, and takes a fresh lease of life.

For his death, *Bhishma* had to lie down on his bed and to wait six months of the sun's southing (*b*). Vide:

शेष्ये अहम् अस्याम् शय्यायां यावत् आवर्त्तनम् रवेः ।

Mahā. VI. 122, 14-15.

The Sun dies every evening, and at the end of every year, springs to life again. Vide :

सप्तभिः पुत्रैः अदितिः उप प्र ऐत् पूर्व्यम् युगम् ।
प्रजायै मृत्यवे त्वत् पुनः मार्त्ताण्डम् आ अभरत् ।

Rv. X. 72.9

Vide also :—

वत्से वस्कये ।

Rv. 1. 164, 5.

And *Bhishma* could die at his own pleasure. Vide:

पिता तुष्टेन मे पूर्व्वम् यदा काली विवाहिता ।
स्वच्छन्द मरणम् दत्तम् अवध्यत्वम् रणे तथा ।

Mahā. VI. 120. 33.

(*a*) The Milky Way lies to the right of *Bhishma*, the Sun-god, reduplicated in the Constellation (Gr.) Herakles. (Lat. Hercules), the Solar Hero.

(*b*) This yearly lying down of the sun is called Sayana (शयन) of Suryya-Nārāyana.

Such are the incidents of life common to both the Sun and *Bhishma.* And to an unbiassed scientific enquirer, we think, the identity is complete. An accurate identification of the Solar Hero will materially increase our knowledge of a great number of star-names and astronomical phenomena, as will appear in the sequel.

On *Bhishma's* fall, (*a*) his holy mother, *the Gaṅgā* or the Milky Way sent down to him the seven Rishis in the guise of a Hamsa (हंस) or Swan. Vide:

तस्य तत् मतम् आज्ञाय गङ्गा हिमवतः सुता ।
महर्षीन् हंसरूपेण प्रेषयामास तत्र वै ॥
ततः सम्पातिनः हंसाः त्वरिताः मानसौकसः ।
आजग्मुः सहिताः द्रष्टुम् भीष्मम् कुरुपितामहम् ।

Mahā. VI. 120, 96-97.

These Swans refer to the bird, Cygnus, (Gr. Kyknos) in the Milky Way. We have it then, that *Bhishma* lies close to the Milky Way. Vāna Mandala (वाणमण्डल) or Sagitta of the West and Hamsa-Mandala in the Milky Way are also close to him. We therefore hold, that the stellar *reduplication of Bhishma* (the Solar-God) is the Constellation Harikulesa (हरिकुलेश), *i.e.,* Hercules of the West.

It is remarkable, that (Lat.) *Hercules* (a Sun-God) = (Gr.) *Herakles* = (Ph.) *Malqarth Harekhal* = (Ak.) *Lugal,* is connected with this very bird sent by *Gaṅgā* to *Bhishma Deva. Malqarth Harekhal* is represented in the sphere as shooting an arrow (the Constellation Sagitta) against the three constellations, the Eagle (Sk. Garuda = गरुड़), the Vulture (= Heb. *Tartak* = Sk. *Tārkshya* or *Vāna Mandala*) and Cygnus (= Sk. *Hamsa Mandala* (हंसमण्डल). He is further reputed to be always slaying those dear and near to him.

R. Brown I. 235.

EXAMPLE IX

THE NAKSHATRA MULA

Mula is the seventeenth division of the Lunar Zodiac, and it lies in the ninth division of the Solar Zodiac. In the Vedic

(*a*) सूर्य्यः देवः विवस्वान् य अष्टमः तु अदितेः सुतः । M. P. 128-39.

age the Nakshatra was also called *Vichrita* or *Vichritau* and consisted of one or two stars. The Siddhānta gives the latitude and longitude of the head-star ; *viz*. Lat. 9°S and Long. VIII —1°. Messrs. Colebrooke and others find that the star indicated is 2 *Vrischikasya* (= λ Scorpionis or the star *Shaulah* of the western maps) ; and its companion star is undoubtedly 7 *Vrischikasya* = υ Scorpionis (*Lesath* ?) of the western charts. These two stars are marked 2 and 7 in the constellation Vrischika in Hindu charts.

We therefore find that the *Nakshatra Vichritau* of the Vedic age consisted of stars 2 and 7 *Vrischikasya* (*i.e.*, λ and υ Scorpionis), since we believe that the *Yogatārās* of the Nakshatras have never been changed.

The Siddhāntas do not give the names of the individual stars composing any Nakshatra. But from the Vedas, we can have the names of the two stars composing the old *Nakshatra Vichritau* (विचृतौ). The Nakshatra is commonly called Mulā (मूला), an abbreviation of the full name Mula-Varhani (मूलवर्हणी). 'Vichrita' (विचृत) means 'destroyer of one's own race', (*Vide*, सर्वं कुलं विचृतति हिनस्ति इति सायण:). *Mulavarhani* also means 'destroyer of one's own race' (*Vide*, मूलं एषां अवृत्तामेति तत् मूलवर्हणी । Tait. Br. 1. 4. 2. 8). The Nakshatra was *Nirriti* (निऋ्ति) for its presiding deity. (निऋ्त्यै मूलवर्हणी Tait Br. 1.5.1.)

Now *Nirriti* means either *Yama* (यम) *i.e.*, Death-God or *Rākshasesvara* (राक्षसेश्वर) *i.e.*, *Rāvana* (रावण), the king of the *Rākshasas* (राक्षस), *i.e.*, the demons. Hence, the Atharva-Vedas declare, 'The Vichritau of Yama.' Vide:

ज्येष्ठायां जातः विचृतः यमस्य ।

Av. VI. 110, 2.

And hence *Vālmiki* puts to the mouth of *Lakshamna*, that '*Mulā* the patron Nakshatra of the demons is blackened and crushed by the touch of the long-tailed Comet.' Vide :

नैऋतं नैऋतानाञ्च नक्षत्रं अतिपीड्यते ।
मूलः मलवतास्पृष्टः धूप्यते धूमकेतुना ॥

Rām. VI. 4. 51.

In the Vedic period the Nakshatra had, as we said, two stars. Vide:

अमी ये सुभगे दिवि विचृतौ नाम तारके।

Tait. Ar. ii, 6, 1.

These two stars are said in the Vedas to be the two dogs of *Yama*, called *Sabalau* (शबलौ). Vide:

अति द्रव सारमेयौ श्वानौ चतुरक्षौ शबलौ साधुना पथा।

Rv. X. 14.10.

They guard the path to *Yama's* abode and look for the dying man. Vide:

यौ ते श्वानौ यम ! रक्षितारौ चतुरक्षौ पथिरक्षी नृचक्षसौ।

Rv. X. 14.11.

Note : Readers may verify the statement by actual observations of the stars concerned, the path meant being a section of the Milky Way called *Pitriyāna*. Vide:

पितृयानः सः वै पन्था वैश्वानर पथात् बहिः। V.P. II. 8.80.

Sabalau (शबलौ) includes Shyam (श्याम) and Sabala (शबल) (cf. *Pitarau*. पितरौ). Vide :

दिव्यौ श्वानौ श्यामशबलौ वैवस्वतकुलोद्भवौ।

Quoted by Sāyana.

Vālmiki makes the 'two dogs' the two spies of Rāvana (रावण), and names them Suka (शुक) and Sārana (शारण). Of the two stars of the *Nakshatra Vichritau*, the eastern one is the Yogatārā (योगतारा) or the head-star of the asterism. Vide:

रोहिणी–आदित्य–मूलानां प्राची।

S.S. VIII. 19.

The post-Vedic astronomers have allotted seven or nine more stars to the Nakshatra to give it the figure of a conch-shell (Sk. शङ्ख), *i.e.*, a blowing shell, kept in every Hindu house for the purpose of raising a *rava* (रव) or row, on festive occasions. These seven stars are 3, 6, 12, 13, 14, 16 and 17 of *Vrischika*. And these stars, added to stars 2 and 7, form the modern *Nakshatra Mulā*. Vide:

मौलिभाजि नवतारकाङ्किते मूलभे सुतनु शङ्ख मूर्त्तिणि।

इति गणक कालिदासः।

To draw a figure of a conch with the nine stars indicated, would be quite a feat. We have drawn the shell of the conch only with the five stars 7, 2, 6, 14 and 3 *Vrischikasya* (υ, λ, κ, ι, θ, *Scorpionis*).

The great Hindu Epic is no doubt capable of being interpreted in an astrological sense. The war between *Rāma* and *Rāvana* is a repetition of the old war between Light and Darkness : between *Indra* and *Vritra*, *i.e.*, the Sun and the Cloud. (Vide, Rv. 1. 32).

In the great Epic, the combatants are simply reduplicated in heavenly bodies. The stellar conch falls in the sign Dhanuh (धनुः), *i.e.*, the Archer of the Hindu Solar Zodiac, and astrologically the Archer is a dark or nocturnal sign. Vide:

अज-गोपति युग्मश्च कर्कि-धन्वि-मृगाः तथा ।
निशा सज्ञाः स्मृताः च एते शेपाश्चान्ये दिनात्मिकाः ।

Manohara Daivagna.

The stellar Conch-shell, presided over by the King of the demons, may be well named Rāvana (रावण) from the fact of a conch being chiefly used in making a *rava* (रव) or sound.

Cf. The Prince of demons is said to have been called *Rāvana* for his having raised a terrible *rava* (रव) or noise after his birth.

The story related in the Rāmāyana describes the overthrow of the Sun by the Sagittarius-Darkness. The Sun-God loses his wife Suryya (सूर्य्या) (*a*) 'the solar light,' in this contest. *Suryya* (*b*) (सूर्य्या) is reduplicated in the heavenly Gaṅgā

(*a*) सूर्य्या सा पुनः इयं सूर्य्यस्य पत्नी ।

Nir. N. XII 1. 7.

(*b*) त्रसरेणुः महावीर्य्याः स्वातिः सूर्य्या सुवर्च्चला
सरण्युः द्युमयी त्वाष्ट्री प्रिये चैता विवस्वतः ।

Trikānda-Sesha.

सूर्य्या एषा एव उषाः सूर्य्या सम्पद्यते ।
सरणयुः सा एव उषा ।

Nirukta. v.6.

(आकाश गङ्गा) or the Milky Way, called Sitā (सीता) (*a*). The Sun-God ultimately triumphs over the dark-king, and Mula-Rāvana (मूल–रावण) true to his astrological characteristic causes the wholesale destruction of his race, *i.e.*, the stars in the *Asura-bhāga* or the southern celestial hemisphere.

The fact that a section of the Milky Way runs through the asterism *Mulā*, gave rise to the amusing anecdote of *Sitā's* sleeping on the picture of *Rāvana*.

This section of the Heavenly *Gangā* is called Rāvana-Gaṅgā (रावण गङ्गा).

The anecdote is not found in the great epic Rāmāyana. But the author of the Padma-Purāna supplements the story of *Vālmiki* with good many anecdotes of similar nature. These supplemental anecdotes throw a flood of light over the real nature of the original narrative that forms the subject of the great epic.

Further light is thrown on the subject by the Persian and Babylonian astrological aspect of the asterism *Mulā*, as explained by Robert Brown; and we reproduce it here.

THE BABYLONIAN ASTERISM

No. XXVII

Kakkab Girtab = The asterism of the Scorpion
Divinity *Ilu-sar-ur.* = The God, leader of the dog

The asterism consists of stars θ, ι, κ, λ and υ Scorpionis. The Euphratean Gir-tab is a symbolical reduplication of darkness, where God Ner-gal (the great hero) the strong one of the great city Hades, reigned enthroned in awful majesty (*b*).

It is the asterism XX *Vanant* (= the stinger) of the Persian scheme of the lunar mansions. The asterism consists of stars

(*a*) *Sitā* literally means *Paddhati* (पद्धति) or furrow. The Heavenly *Sitā* was supposed by the ancients to be the Sun's path, 'The Sky-furrow, = the Ecliptic'. (R. Brown). Vide:

इन्द्रः वृत्राय वज्रं उदयच्छत् । सः दिवं अलिखत् ।
सः अर्य्यम्नः पन्था अभवत् । Tait Br. i. 7. 6.6.

(*b*) Prof. Sayce regards *Ner* or *Nerra* as the personification of Death (R. Brown).

Cf. Sk. Nirriti = the Death-God.

$\theta, \iota, \kappa, \lambda$ and υ Scorpionis, and it has given its name to the Milky Way. Hence *Vanant* means also the Milky Way in the Zend-Avesta. Vide, *Vanant Yast.*

The asterism represents, we believe, Panchajana (पञ्चजन), a mythical *Asura*, whose skeleton formed the blowing shell of *Srikrishna*. We have accordingly named the star 14 *Vrischikasya.*

It also represents 'the conch-shell' sounded by *Bhagiratha*, while leading the Heavenly *Gangā* from heaven down to the spot on the earth, where lay the ashes of the sons (stars) of King *Sagara* (सगर) *i.e.*, the Sky.

Note : Sk. *Sagara*=The Sky. Vide: Nir N. 1. 3. 14.

EXAMPLE X

BUDHA (बुध)

Brahmā, says the Suryya-Siddhānta (revealed at the end of the *Satya-yuga*), divided himself into twelve equal parts called Rāsis (राशि), and secondly into twenty-seven equal parts called Nakshatras (नक्षत्र) (*a*). Vide :

पुनः द्वादशधा आत्मानं विभजत् राशि संज्ञयम् ।
नक्षत्ररूपिणं भूयः सप्तविंशात्मकं वशी ।। S.S. XII. 25.

The object of the former division is to fix the limits of the Sun's monthly course in the Zodiac, and the object of the latter division is to fix the limits of the Moon's daily course in it. A Nakshatra is therefore metaphorically called *Chandra Griha* (चन्द्रगृह) or the lunar mansion.

The *Itihāsa* (इतिहास) explains this simple astronomical thesis in its own peculiar way.

In the beginning of the *Tretā-Yuga*, says the Mahābhārata, *Asvini*, *Bharani*, *Krittikā* and others, twenty seven daughters in all, were born to *Prajāpati Daksha*. And he duly married them to the modern *Tārāpati* (तारापति) or the Moon.

It is interesting to note, that this re-arrangement of the Zodiac at the end of the *Krita-Yuga* presupposes an older division of the Zodiac, existing from the commencement of the *Krita-Yuga* itself. This older or primitive division evidently

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(*a*) Daksha is another name of the Creator *Brahmā*.

means, we believe, the twelve divisions of the Zodiac, marked by 12 stars, for the purpose of computing the *Bārhaspatya* (बार्हस्पत्य) the Jupitorial year. (*a*). This fact led to Brihaspati's being called *Tārāpati* in archaic days.

This change of husbands of the *Tārās* (तारा), *alias Nakshatras* gave rise to the well-known popular story of the Moon's elopement with *Tārā* and the birth of *Budha* (बुध) or Mercury, as the result of their illicit union. Even the invention of a second birth could hardly save the reputation of the unsullied stars, from the hands of satirists or *Aitihāsikas* (story-tellers).

The planet *Budha* is also supposed to be born of the Lunar Asterism *Sravisthā* (श्रविष्ठा), and it is therefore called *Sravishthā Bhava* (श्रविष्ठा भव).

EXAMPLE X

MANGALA GRAHA (मङ्गल ग्रह)

Sk. *Angāraka* (अङ्गारक) literally, the red-hot charcoal Sk. *Lohitānga* (लोहिताङ्ग) or the red-bodied	Sum. Ak. *Bir* (Vermilion) Ak. *Simut* (The red-light)
Sk. *Yama* (यम) (*b*) or the Death-God Sk. *Virabhadra* (वीरभद्र) or The Great Hero Sk. *Krura-Graha* (क्रूरग्रह) or the Evil Planet	Euph. *Kakkab Batga* (star of Death) Euph. The star of the Hades-God *Nergal* (The Great Hero) Sum. Ak. *Khul* (The Evil) Per. *Ker-wan Kush* (The Grave-digger of the caravans)
Sk. *Virochana* (विरोचन) or The Opaque one Sk. *Nava-didhiti* (नवदिधीति) or One of fresh lustre	Euph. *Numia* (That which is not)

(*a*) The names of some of the 12 months, *Madhu, Mādhava, Sukra, Suchi* etc. of the Vedic age, are connected with these 12 divisions or their presiding divinities.

(*b*) Like the waning Sun, the fading Mars, when receding from the Earth is called *Yama* (यम).

Sk. *Kumāra* (कुमार) or The Prince — Ak. *Sarru* (The King)
Sk. *Mangala* (मङ्गल) or The Good One — Euph. *Manma* (No body)
Sk. *Māra* (मार) — Lat. *Mars*. Gr. *Ares*
Sk. *Varshārchis* (वर्षार्चिः) or One bright in the rainy season
Sk. *Āshādhā-bhava* आषाढ़ाभव or The child of the *Nakshatra-Āshādhā*
Sk. *Rādheya* (राधेय) or The child of the *Nakshatra Rādhā*
Sk. *Kuja* (कुज) or the child of the Earth
Sk. *Sambarta* (सम्वर्त्त) or The Messenger

The planet Maṅgala, says the Skanda Purāna, is Yama (यम). Vide:

धरात्मजः कुजः भौमः भूमिजः भूमिनन्दनः ।
अङ्गारकः यमः चैव सर्व्वरोगापहारकः ।।

In the Euphratean Astro-theogony, the planet Mars is the star of the Hades-God *Nergal* (=the Great Hero). Vide, R. Brown. I. 73.

The planet *Mangala* says the Padma Purāna is a duplication of *Kārttikeya*—Orion (*a*). Vide:

कार्त्तिकेय-अनुरूपाय सुरूपाय नमः नमः । P. P. I. 24.

The planet *Mangala*, says the *Graha-yāga-tatva*, has *Kārttikeya* for its presiding deity. Vide:

अस्य अधिदेवता कार्त्तिकेयः ।

There is thus a particular connexion between the ill-omened red planet Mars and *Kārttikeya*, represented by the ill-omened red star Visākha-Ārdrā (विशाख आर्द्रा) (*b*).

Note. *Visākha* is a name of *Kārttikeya*. Vide:

विशाखः शिखिवाहनः । Amarakosha.

(*a*) In the West, Mars is said to have his reduplication in the red and unlucky star α Scorpionis (=1 Vrischikasya) called (Gr.) Antares (the equal-to-Ares).

(*b*) In fact *Maṅgala* (Mars) is said to have emanated from the body of *Kārttikeya*. Vide.

ततः शरीरात् स्कन्दस्य पुरुषः पावकप्रभः ।
भक्तुम् प्रजाः सः मर्त्तानाम् निष्पपात महाग्रहः ।।

Mahā. III. 19. 24.

Mangala is also called *Virochana* (विरोचन) (*i.e.*, one without glow) in India, and *Numia* (that which is not) in Babylon, from the fact that the planet recedes from the earth, until it is almost invisible. Cf. "Mars is the God of the blind." (R. Brown).

For its red light, we call it *Angāraka* (अङ्गारक), *i.e.*, 'red-hot charcoal' and *Lohitānga* (लोहिताङ्ग), *i.e.*, 'red-bodied'. In the West, they call it (Ak) *Simut* (red star) and *Bir* (vermilion).

As the war-god, we call it *Vira-bhadra* (वीरभद्र), literally the "hero-excellent".

As the most ill-omened planet, by way of humouring it, we call it *Mangala* (मङ्गल), *i.e.*, "the good one" and the Babylonians knew it as *Khul* (the evil), and out of fear he would take no names of it, but would speak of it as *Manma* (No body).

The planet shines in the rainy season, and is called *Varshārchis* (वर्षार्चिः). Astrologically, *Mangala* is the son of *Prithvi* (पृथ्वी), *i.e.*, the Earth and of her husband *Vishnu* (*a*). Vide:

उपेन्द्र वीजात् पृथ्वयाम् तु मङ्गलः समजायत ॥

B. V. P. I. 9. 21.

It is also said to have owed its birth to a sweat-drop of *Vishnu*, and to have been nursed by the mother earth (*b*). Vide, Sk. P. 1. 11.

पुरा हि भ्रमतः विष्णोः स्वेदविन्दुः पपात ह ।
महान् ततः कुमारः असौ लोहिताङ्गः महीतलात् ।
जातः स्नेहेन मेदिन्याः वर्द्धितः पृथिवीपतेः ।

The Vāmana Purāna relates its birth to have taken place when the great *Asura Andhaka* literally the darkness was killed by *Siva*, the Sun-God. Vide:

सः भुवाम् न्यपतत् विप्र स्वेदविन्दुः शिवाननात्
तस्मात् अङ्गार पुञ्जाभः बालकः समजायत ।
सः बालः तृषितः अत्यर्थम् पपौ रुधिरम् आन्धकम् ।
ग्रहाधिपत्यम् जगतः शुभाशुभम् भविष्यति त्वत्–वशगम् महात्मनः ।

Vām. P. 68.

(*a*) So the planet *Rādheya-Mangala* (राधेय-मङ्गल) was a son of *Vishnu* — *Āditya*, the Sun. Vide:—

विष्णुः आदित्यः । Nir. IV. 2.

(*b*) Mars is five times brighter when nearest to the Earth.

The *Padma Purāna* betrays the secret of many a myth, in which Mars plays an important part.

In ancient days, says the Purāna, a sweat-drop fell from the brow (= the Moon) of the angry *Trisuli* (त्रिशूली), literally 'the Lanceator', for the destruction of *Daksha*. Passing through all the Pātālas (पाताल), it burnt the seven seas. It had many heads and many eyes, and it looked like a burning fire. It had 10,000 arms and 10,000 legs. It was called *Vira-bhadra*. *Vira-bhadra* destroyed *Daksha's* fire sacrifice [in honour of Brihaspati (बृहस्पति) *i.e.* Jupiter]. Siva recalled him, and said, 'Thou hast well destroyed *Daksha's Yajna* ; no need of burning the world any more. Allow the world to enjoy peace, and be the foremost of the planets. Son of the Earth ! thou shalt bear the title of *Angāraka* (अङ्गारक), *i.e.*, 'red-hot charcoal' and thou shalt be translated to the heavens'. Hearing this, *Vira-bhadra* of variable brilliancy was pacified, and suddenly turned into a planet. While receding from the earth, his brilliancy undergoes a variety of changes, until he becomes almost invisible, and he is therefore called *Virochana* (विरोचन), *i.e.*, 'the dark one' by the *Devas* and *Dānavas*. The planet is also called Kuja (कुज), *i.e.*, son of the Earth, *Lohitānga* (लोहिताङ्ग), *i.e.*, red-bodied, and of the five planets it is the middle one. Its brilliancy is equal to that of *Kārttikeya* (=Visākha-Ārdrā). Vide:

शुक्र उवाच—
पुरा दत्तविनाशाय कुपितस्य त्रिशूलिनः ।
अपतत् भीमवक्त्रस्य स्वेदबिन्दुः ललाटतः ।
भित्वा समस्तपातालम् अदहत् सप्त सागरान् ।
अनेकवक्त्रनयनः ज्वलत्-ज्वलन-भीषणः ।
वीरभद्रः इति ख्यातः करपाद-अयुतैः युतः ।
कृत्वा सः यज्ञ-मथनम् पुनः भूतस्य संप्लवम् ।
त्रिजगत् निर्दहन् भूयः शिवेन विनिवारितः ।
शिव उवाच—
कृतम् त्वया वीरभद्र ! दत्तयज्ञविनाशनम् ।
इदानीम् अलम् एतेन लोकदाहेन कर्म्मणा
शान्तिप्रदानात् सर्व्वेषाम् ग्रहाणाम् प्रथमः भव ।
अङ्गारकः इति ख्यातिम् धरात्मज ! गमिष्यसि ।
देवलोके द्वितीयश्च त्वत्स्वरूपम् भविष्यति ॥

भार्गव उवाच—

एवम् उक्तः तदा शान्तिम् अगमत् कामरूपधृक् ।
सञ्जातः तत्क्षणात् राजन् ग्रहत्वम् अगमत् पुनः ॥
विविधा च रुचिः जाता यस्मात् एव विदूरगा ।
विरोचनः इति प्राहुः तस्मात् त्वाम् देवदानवाः ॥

*   *   *   *   *   *

कुजाय लोहिताङ्गाय ग्रहमध्यस्थिताय च ।
कार्त्तिकेयानुरूपाय सुरूपाय नमो नमः ॥ P.P. 1.24.

We therefore get the equation *Vira-Bhadra* = the Planet *Mangala* = *Virochana*, the son of *Prahlād* or the Moon (*a*), which adorns *Siva's* forehead.

We further find that *Mangala alias Yama* = *Manma alias Ner-gal*. It is interesting to observe that the Vedic *Devatā Kāma* (काम) alias *Māra* has all the characteristics of the Babylonian God *Ner-gal*, who is a variant of *Yama Mangala*. Vide: Vithi I, Māra Tārā.

CONCLUSION

These are, in short, a few of the examples which illustrate our idea that the narratives found in Hindu Sāstras are susceptible of being interpreted in a secular and scientific aspect, when supported by the testimony of the stars themselves. The idea is the outcome of many years' study of the subject. But we have succeeded in working it out only in a few instances. Much more will be accomplished in the future by patient workers in the field with better means and ampler opportunities at command.

(*a*) यथा प्रह्लादनात् चन्द्रः ।

TARA MANDALAS AND NAKSHATRAS
VITHI I (*a*).

Vithi I. runs from the North Pole Star to the South Pole Star extending 30° from west to east along the celestial equator, *i.e.*, from station XII to station I in both the sidereal hemispheres. Vide, Chart 5.

It consists of six constellations (*b*).

1. Parsu Mandala (पर्शु मण्डल) (29), (*c*).
2. Trikona Mandala (त्रिकोण मण्डल) (4)
3. Mesha Mandala (मेष मण्डल) (18)
4. Timi Mandala (तिमि मण्डल) (22)
5. Yagna-kunda Mandala (यज्ञकुण्ड मण्डल)
6. Yāmi Mandala (यामी मण्डल) (34).

1. PARSU MANDALA (पर्शु मण्डल) [70](*d*)

Sem. *Bar-sav* (the son of hair). Ph. *Bar-sav*. Gr. *Perseus* (the most famous of all men). Lat. *Perseus*.

The constellation Perseus stands at the top of *Vithi* I, close to Brahma Mandala (ब्रह्म मण्डल), *Auriga*. According to the Almagest, the constellation contains 29 stars visible to the naked eye. The Sura-nadi (सुरनदी) or the heavenly stream (*i.e.*, the Milky Way) runs through the constellation. The stars 8, 3, 1, 6 and 17 *Parsoh* (η, γ, α, δ and μ Persei) form a well-marked Bow; while the stars 3, 11, 13 and 12 *Parsoh* (γ,τ,θ and ι Persei) form the blade of a *Kuthāra* (कुठार) the Pole-axe, the stars 1 and 2 *Parsoh* (α and β Persei, called Mirfak and Algol respectively) constituting the Pole. Temporary stars looking like burning fire-balls, blaze forth and then fade away in this constellation and in Brahma Mandala, from time to time.

(*a*) A *Vithi* is a section of the star-sphere. Here we use the term in the sense of a section running from the North Pole to the South Pole, extending 30°, from the west to the east, and forming a twelfth part of the star sphere.

(*b*) The constellations are arranged in the *Vithis*, with reference to the Longitude of the largest star in each of them.

(*c*) The figures indicate the number of naked-eye stars in the constellation according to *Megale Syntaxis Tes Astronomias* of Ptolemy, commonly called by its Arabic title 'The Almagest' (i.e. the greatest).

(*d*) The figures in brackets [ ] indicate the number of stars in the constellation accordiug to Prof. Peck.

his fact very likely gave rise to the Greek myth that Zeus in e form of a shower of gold, came down through the roof of prison where *Danae* (=Dawn) had been confined and me by her the father of Perseus.

According to the Greek legends, the Sun-God Perseus (the famous of all men) holds in his hand the head of Medusa, one of the three Gorgon sisters) which he himself had cut off.

The constellation with all its legendary tales, reminds one of the Hindu legendary hero *Parsu-Rāma* (पर्शुराम), commonly called *Parasu-Rāma* (परशुराम), a son of *Yamadagni* (यमदग्नि), literally 'the burning fire', and of *Renukā* (रेणुका) literally 'one made of dusts' (*i.e.*, the Milky Way). He was born with *Parsu* (पर्शु), a battle-axe in his hands (*a*), with which he cut off the head of his mother *Renukā* (रेणुका), under the orders of his great ather.

To expatiate his sins, the matricide hero had to bathe in the sacred stream Brahma-putra (ब्रह्मपुत्र), a river, he himself caused to flow by cutting its way through the dry lake called Brahma-kunda (ब्रह्मकुण्ड) *lit.* 'the lake of Brahmā' (ब्रह्मा).

He alone is said to have extirpated the whole warrior class twenty-one times. That makes him the most famous of all men in India.

We know that Paurānic poets speak of the prototype of *Parsu-Rāma* as a collection of stars. Vide :

तन्मध्ये पुरुषः शुद्धः किरीटी नीलवाससा।
रत्नदाम्नाय विद्धाङ्गः दुष्प्रेक्ष्यः ज्योतिषाम् गणः ॥
ततः रामः इति ख्यातः प्रजातः अयम् भृगोः कुले ॥

P. P. I. 49.

(*a*) भारावतारणार्थाय जातः परशुना सह।
सहजः परशुः तस्य तम् जहाति कदाच न ॥

K. P. 83. 5.

Cf. *Indra* was also born with the *vajra* (वज्र), the thunder-bolt. Vide:

आविः करिक्रत् वृषणम् सचाभुवम् वज्रम् इन्द्र सचाभुवम्।

Rv. I. 131. 3.

Note: *Parasu* is one of the names of *vajra*. Therefore, *Parasu-Rāma* a phase of *Indra*.

We have it then, without depending much on the phonetic affinity of the Gr. word *Perseus* with the Sk. *Parsu*, that

Gr. *Perseus* = Sk. *Parsu-Rāma*.

From the position, the star 1 (α Persei) occupies in the constellation, we have named it *Kuthāra-prishtha* (कुठार पृष्ठ).

STAR MAYAVATI (मायावती)

Sum-Ak. *Sibi* (= double eye)
Sem, *Alghul* (= the evil one)
Eng. Agol.

The star 2 of Parasu (= β Persei) is a variable star and we identify it with *Māyāvati*. The star in general shines as a star of the 2nd magnitude. It is a *Kāmarupa-tārā* (कामरूप तारा) or *Vahurupa-tārā* (वहुरूप तारा) *i.e.*, a variable star. Once every 69 hours, it slowly decreases in brightness till in about $4\frac{1}{2}$ hours it has lost almost $\frac{5}{6}$th of its light, and appears as a star of the fourth magnitude. It now shines as such for about 19 minutes and then in $3\frac{1}{2}$ hours' time regains its maximum brightness and retains it for 60h 41m—the remaining part of its short period of 69 hours. The star was therefore called *Sibi* (= double eye) by the Babylonians, and *Alghul* (= the demon monster of the West) by the Semitics and Arabs.

Māyāvati (मायावती), literally 'the changeful', is the consort of *Māra* (मार), the Hindu Cupid.

For further particulars, Vide, *post*, the star *Māra*.

We have said that *Parasu-Rāma* = *Indra*, and the variable nature of its principal star *Māyāvati* (मायावती), 'the changeful,' made the Vedas declare :

'*Maghavan* (*Indra*) weareth every shape at pleasure, effecting magic changes in his body.' Vide :

रूपम् रूपम् मघवा बोभवीति मायाः कृणानः तन्वम् ।

Rv. III. 53. 8

RENUKA MUNDA (रेणुका मुण्ड)

STAR 7. PARSOH = ρ PERSEI

This star with the star Algol and some smaller stars adjoining it, form the 'Caput Meduci, (the head of Medusa) of the Western charts. But we have made the star 7 with some smaller stars adjoining it, representative of the head of *Renuka* and have named the group '*Renukā Munda*'.

2. TRIKONA MANDALA [27]
(त्रिकोण मण्डल)

Gr. *Deltoton* Lat. *Triangulum.*

We have translated the constellation name.

MESHA RASI (मेष राशि)

This *Rāsi* is the first of the twelve divisions of the Solar Zodiac (*a*) ; and comprises 30° of it extending from a point lying 10 minutes east of the star 6 of Mina (मीन) (ζ Piscium). We may call the star Mula-kilaka (मूलकीलक) *lit.* the starting station. The other eleven *Rāsis* follow it one by one eastward. Vide:

विषुवत्-क्रान्ति-वृत्त-ऐक्यात् पूर्व्वभागस्थिताः स्थिराः ।
मेषाद्याः राशयः क्रान्ति-वृत्तयः पूर्व्व-दिक्क्रमात् ॥

Munisvara.

The sun in its apparent annual journey through the heaven passes successively into and out of the twelve *Rāsis* or signs of the Zodiac. Each of these *Rāsis* is popularly regarded as occupied by a single Tārā Mandala (तारामण्डल), from which it derives its particular name. But a *Rāsi* and its Zodiacal *Mandala* do not correspond, and the 'Signs of the Zodiac' are not the same as the 'constellations of the Zodiac' (more often spoken of as the 'Zodiacal constellations'). In fact, there are more than 12 *Tārā Mandalas* in the Zodiac. Nor are the twelve Tārā Mandalas, from which the 12 *Rāsis* derive their names, confined within the limits of their respective *Rāsis*.

(*a*) पुनः द्वादशधा आत्मानं विभजत् राशि संज्ञकम् ।

S.S. XII. 25

Thus Mesha Rāsi consists of the Western portion of Mina Mandala (मीन मण्डल), the eastern portion of Mesha Mandala (मेष मण्डल), and the northern portion of Timi Mandala (तिमि मण्डल) and it comprises the whole of the Nakshatras *Asvini* and *Bharani*, and the first quarter of the Nakshatra *Krittikā*.

3. MESHA MANDALA [52]
(मेष मण्डल)

Gr. *Krios* Lat. *Aries*

Eng. The Ram. Hindu Astrology *Kriya* (क्रिय) (*a*)

Presiding deity *Maṅgala*.

According to the Almagest the *Tārā Mandala* contains 18 stars visible to the naked eye. It derives its name from the Sun-God *Indra*, who is styled 'the Ram.' Vide :

त्वम् सु मेषम् महया स्वः ... ... ।

Rv. I. 52. 1.

Within the *Mandala*, there are the Nakshatras Asvini (अश्विनी) and Apabharani (अप-भरणी), the last two divisions of the Lunar Zodiac (*b*). The stars of the former form the tail and those of the latter the head of the stellar Ram.

NAKSHATRA ASVINI (अश्विनी नक्षत्र).

Euph. *Kakkab Gam*. (the asterism of the sickle)
Ar. *Al-Sheratan*. Tait Br. *Asva-yujau* (अश्वयुजौ)
Presiding deity. *Asvinau*

The Nakshatra (space) is the twenty-sixth division of the modern Lunar Zodiac of 27 Lunar-Mansions (*c*), and the first Lunar Mansion of the modern Luni-Solar Zodiac. The Nak-

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(*a*) क्रिय-ताबुरि-जितुम्-कुलीर-लेय-पाथय-यूप-कौर्प-आख्याः
तौक्षिकः आकोकेरः हृद्रोगः च अन्त्य-भम् च-इत्थम् ।
इति दैवज्ञमनोहरः ।

(*b*) नक्षत्ररूपिणम भुयः सप्तविंशात्मकं वशी ॥

S.S. XII. 25.

(*c*) Lunar mansions are called *Sieu* in China and *Manzils* in Central Asia.

shatra (Asterism) consists of the stars 1, 2, 4, Meshasya (α, β, γ Arietis). It looks like a horse-head. Vide:

तन्वि घोठकमुखाकृतौ त्रिभे।

Kālidāsa.

The star 1 (= α Arietis) is the Yoga-tārā (योगतारा) *i.e.*, the head star or the principal star of the asterism. The Surya-Siddhānta defines the *Yoga-tārā* to be the northern-most star of the group (*a*), and places it at Lat. 10°N and Long. 0-8°. Colebrooke identified the star indicated, with the star 1 of Mesha, called Hamal in the West. We have transliterated the name into Amala (अमल). Astrology allots the *Nakshatra* to the brothers Asvinau (अश्विनौ) from whom it originally derived its name *Asvini* ; and the twenty-sixth division of the Lunar Zodiac is called after this asterism. It is from the Nakshatra Asvini that the month of Āsvina (आश्विन) derives its name. For, the full Moon of this month is generally observed to pass through this division of the Lunar Zodiac.

In the Vedic age the *Nakshatra* was called Asvayuk (अश्वयुक्) and it consisted of two stars. Vide:

अश्विभ्यः स्वाहा अश्वयुगभ्याम स्वाहा।

T. Br. III. 1. 5.

NAKSHATRA APA-BHARANI

(अपभरणी नक्षत्र)

Lat. *Musca.* Ar. *Al-botein*

Black Yv. *Ap-sarani* (अप्सरणी)

Presiding deity : *Yama*

This *Nakshatra* (space) is the 27th division of the ancient Lunar Zodiac and the second division of the Luni-Solar Zodiac. The Nakshatra (asterism) consists of the stars 3, 6, 9 Meshasya (= 41, μ, 36 Arietis). The stars form nearly an

(*a*) विशाखा अश्विनी सौम्यानाम् योगतारा उत्तरा स्मृता।

S.S. VIII. 16.

equilateral triangle (*a*). The star 3 (=41 Arietis) is the *Yogatārā*. The Suryya-Siddhānta defines the *Yoga-tārā* to be the southern-most star of the group (*b*), and places it at Lat. 12°N, and Long 0-20°. Burgess identifies the star with the star 3 of Mesha. We have called it Apsarani (अप्सरणी).

Astrologically, *Yama* (यम) is the presiding deity of the asterism, which is therefore also called Yāmya (याम्य) or Yama-daivata (यमदैवत). By astronomical abbreviation the *Nakshatra* is commonly called Bharani (भरणी).

In the Vedic age the *Nakshatra* was also called *Ap-sarani*. *Apa-varani* seems to have had three stars. Vide:

यमाय स्वाहा, अपभरणीभ्यः स्वाहा

T. Br. III. 1. 5.

Ar. *Al-botein* consists of the stars 7, 5, 8, Meshasya (ε, δ, ζ, Arietis).

4. TIMI MANDALA [108]

(तिमि मण्डल)

Sum-Ak. *Kumar* (=dark). Sem. *Kumaru*

Gr. *Ketos* (= the seamonster = a whale)

Lat. *Cetus*. Eng. The seamonster

The constellation consists of twenty-two naked-eye stars. We have translated the name. The star 1 of Timi (= o Ceti), called Mira in the West, deserves special notice.

STAR MARA (मार तारा)

Ak. *Akh-na* (= worm + eclipse)

Gr. *Mira* (wondrous) Lat. *Mira*

The star 1 of Timi is a *Kāmarupa-tārā* (कामरूप तारा) (*i.e.*, one "changing at its pleasure") or a variable star, which during each interval of 331 *d*. 8 *h*. passes through the following phases. During 15 days it attains and preserves its maximum brightness,

(*a*) तारकत्रयमिते त्रिकोणके। इति कालिदासः।

(*b*) भरणी-आग्नेय पित्र्याणाम रेवत्याः चैव दक्षिणा।

S.S. VIII. 18.

the brightness of a star of the second magnitude; its brightness afterwards decreases during the next three months, until it becomes completely invisible. The star remains in this state for five months after which it reappears, its light increasing continuously during three other months. Its cycle of variability then comes to an end and it attains its maximum brightness.

The planet Maṅgala (मङ्गल) *i.e.*, Mars, the son of *Vishnu*, when nearest to the Earth in opposition, is five times brighter than when it is farthest away from her. This fact evidently led to the reduplication of *Maṅgala* in the star *Māra*.

As patient and careful observers of the heavens, the Hindus could not but detect the frolics of this *Kāmarupa-tārā*. And the result was the following narrative about Kāma (काम) *i.e.*, the Indian Cupid, found in the Purānas, but based on the authority of the Vedas. *Kāma* is now generally regarded as the God of wish and desire in general, including love. In the Vedas, he is identified with Agni (अग्नि), the Fire-God ; Vide:

य: देव: विश्वात् यम् उ कामम् आहु: ।

Av. III. 21. 4.

and he is said to have gone into the sea. Vide :

काम: समुद्रम् आविवेश ।

Av. III. 29. 7.

The Paurānik story runs thus : On the sixth day of the birth of Pradyumna (प्रद्युम्न) *alias* Maṅgala (मङ्गल) *i.e.*, Mars, the son of *Vishnu-Krishna*, the demon Sambara (शम्बर) *i.e.*, darkness, cloud or the dark constellation Mina (*a*), stole the boy away from the lying-in-room, to get rid of his future destroyer and threw the boy into the sea, where a fish ate him up. Māyāvati (मायावती), *i.e.*, Venus (*b*), the consort of *Pradyumna* (Cupid) who lived with *Sambara*, passing herself off as the wife of the demon *Sambara*, got her boy-husband from the fisherman who had caught the fish. The boy grew up to a

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(*a*) Pisces is a dark *Rāsi* and Venus becomes powerful in it.

(*b*) Venus has her phases like the Moon. She may therefore be called Māyāvati (मायावती) *i.e.*, 'the changeful'. The star *Māyāvati* therefore well represents Venus in the sidereal heaven.

man and came to know his own wife. He then slew the demon *Sambara* and liberated his wife from the demon's bondage. Vide:

षष्ठे अह्नि जातमात्रं तु प्रद्युम्नं सूतिकागृहात् ।
मम एषः हन्ता इति मुने ! हृतवान् कालशम्बरः । २
हृत्वा चिक्षेप च एव एनं ग्राह-उग्रे लवणार्णवे ।
पतितं तत्र च एव एकः मत्स्यः जग्राह बालकं । ४
दारिते मतस्यजठरे सा ददर्श अतिशोभनं ।
कुमारं मन्मथतरोः दग्धस्य प्रथमाङ्कुरं । ७
नारदेन एवमुक्ता सा पालयामास तं शिशुं ।
सा च अस्मै कथयामास न पत्रः त्वं ममेति वै । १५
इत्युक्तः शम्बरं युद्धे प्रद्युम्नः सः समाह्वयत् । १७
उत्पत्य च तथा सार्द्धं आजगाम पितुः गृहं । १६

V. P. v. 27. 2-1:0

We believe that the stellar reduplications of *Māyāvāti*, *Sambara* and *Kāmadeva* are the star *Māyāvāti*, the fish in the Mina Rāsi (Pisces), and the star *Māra* (o Ceti) respectively.

In the East, the invisible state of the star *Māra* represents the temporary death of *Kāma*, supposed to have been caused by the superior lustre or fire of the star Lubdhaka (लुब्धक) *i.e.* Sirius, the stellar representative of the God *Siva Bhutavat* (Vide—Introduction, Ex. VI) who predicted the reappearance of *Kāma*. Vide:

रतिः उवाच ।

कामस्य दयिताम् भार्य्याम् रतिम् माम् विद्धि सुव्रत ।
गिरौ अस्मिन् च भगवान् गिरीशः तपसि स्थितः ॥
तेन प्रत्यूह रुष्टेन क्रोधात् विस्फार्य्य लोचनम् ।
विमुच्य अग्नि-शिखा-ज्वालाम् कामः भष्मावशेषितः ।
अहं तु शरणम् याता तं देवं भयविह्वला ।
स्तुतवति—अथ सन्तुष्टः ततः माम् गिरीशः अब्रवीत् ।
तुष्टः अहम् कामदयिते कामोत्पत्तिः भविष्यति ।

P. P. 1. 40.

Cf. Gk. *Eros* (Lat. *Amor* or *Cupido*) the God of Love, is the son of Venus and Mars. He is the usual companion of his mother Venus (W. Smith).

In the West the temporary disappearnce of the star may have given rise to this idea of Cupid's blindness.

We had thus to draw Cetus swallowing the body of the boy Cupid represented by the variable star Mira (*a*).

It is interesting to note that in the Babylonian legends, Cupid and Venus are said to have thrown themselves into the waters of the Euphrates, at the appearance of the giant Typhon (=The Indian *Sambara*) near the Southern Fish (= Pisces Australis), the Dakshina Mina (दक्षिण मीन) of Hindu Charts; while Hyginus connects Pisces with the Euphrates giving a legend that Venus and Cupid took the form of fish in that river (R. Brown).

According to a Greek myth, Pisces are the fish which carried on their backs Venus and Cupid when they fled from Typhon (R. Brown).

5. YAJNA-KUNDA MANDALA [58]

(यज्ञकुण्ड मण्डल)

Lat. *Fornax* Eng. Furnace

The constellation was invented by LaCaille in 1752. We have simply translated the western name of the constellation.

6. YAMI MANDALA [143]

(यामी मण्डल)

Ak. *Pur-edin* (=River, strong one of the Plain, The Euphrates)	Gr. *Eridanos* and *Potamos*

Lat. *Eridanus*, and *Amnis*

The stars in this constellation form the figure of a river with a human skull on its bank. We have called the stellar river Yāmi (यामी), the great daughter of the Sun-God. The heavenly *Yamunā* (यमुना) or *Yāmi* is supposed to take its rise from the celestial Brahma-Putra (ब्रह्मपुत्र) *i.e.*, a portion of the Milky Way adjoining Brahma Mandala, the Constellation Auriga, and to fall to it again. Vide :

(*a*) Mina-Ketan (मीन-केतन) *i.e.*, one who has a fish for his 'House', is another of the names of *Kāma*. Vide: प्रद्युम्नः मीनकेतनः । इत्यमरः

प्रागेव दिव्य यमुना तं त्यक्त्वा ब्रह्मण: सुतम् ।
पुन: पतति लौहित्ये गत्वा द्वादश योजनम् ।

K. P. 82. 90.

The star 1 of *Yāmi* is called Achernar in the West. We have translated the name of the star Achernar (Sem. *Akhir-al-Nahr* = end of the river) into Nadi-Mukha (नदीमुख).

VIPRA MUNDA (विप्र मुण्ड)

The stars 4, 20, 8, 7, 19, 13, 12, 17 and 9 of the constellation *Yāmi* (= α, π, δ, ϵ, ζ, η, τ^3 τ^4 and another, Eridani) are in the shape of a human head. The 'Stellar Head,' we believe, represents the head of Phæthon (the shining one), cut off by Zeus on the banks of the Eridanus.

Visva-rupa (विश्वरूप), literally 'the most beautiful in the world' the Indian analogue of the Greek Phæthon, was subdued by *Indra* and killed by *Trita* (Heavenly Light) ; and we have accordingly called 'the Stellar Head,' *Vipra Munda*.

———

TARA MANDALAS AND NAKSHATRAS

VITHI II

The second *vithi* consists of the following constellations :—

1. Chitra-kramela Mandala (चित्रक्रमेल मण्डल)
2. Brahma Mandala (ब्रह्म मण्डल) (14)
3. Vrisha Mandala (वृष मण्डल) (44)
4. Ghatikā Mandala (घटिका मण्डल)
5. Suvarnāsrama Mandala (सुवर्णाश्रम मण्डल)
6. Ārhaka Mandala (आढ़क मण्डल)

1. CHITRA-KRAMELA MANDALA [117]

(चित्रक्रमेल मण्डल)

Lat. *Camelopardalis* Eng. Giraffe

This *Mandala* stands at the top of *Vithi* II. The constellation was invented by Hevelius in 1690. We have simply translated the constellation name of the West.

2. BRAHMA MANDALA (72)

(ब्रह्म मण्डल)

Rv. *Rathitama Pushan* (रथीतम पूषन्)
lit. *Pushan*, the best of the charioteers
Ak. *Margidda*. Ph. *Rakhov* (charioteer)
Euph. *Mar-urbi* (chariot)
Gr. *Heniochos* (bridle-holder)
Lat. *Auriga* (waggoner). Eng. Charioteer.

To the south of Chitrakramela, lies the important Brahma Mandala. In this Mandala there are 14 stars visible to the naked eye.

The venerable bard of Vithoor speaks of Brahma Rāsi (ब्रह्मराशि) or the constellation Brahma in the following terms:—

"The planet Sukra (शुक्र) (=Venus of the West), a son of *Bhrigu*, with serene light follow thee. *Brahma Rāsi* and the *Rishis* look cloudless and they move round the star Dhruva (ध्रुव) *i.e.*, *Polaris*, displaying their full brilliancy." Vide:

उशना च प्रसन्नार्चिः अनुत्वां भार्गवः गतः ।
ब्रह्मराशिः विशुद्धश्च शुद्धाश्च परमर्षयः ।
अर्चिष्यन्तः प्रकाशन्ते ध्रुवं सर्व्वे प्रदक्षिणम् ।

Rām. VI. 4-48.

So the great poet gives us the following facts : (1) *Brahma Rāsi* is a constellation ; (2) it does not lie far away from the *Rishis* (ऋषिः) or the Great Bear ; and (3) it moves round *Polaris*.

What constellation then is this *Brahma Rāsi* of *Vālmiki* ? Or in the language of Astrology, what is that constellation which is presided over by *Prajāpati Brahmā* ?

The Suryya-Siddhānta gives the latitudes and longitudes of the two stars, Prajāpati (प्रजापति) and Brahma-hridaya (ब्रह्महृदय). It places the star *Prajāpati* at Lat. 38° N. and Long I-27°, and the star *Brahma-hridaya* at Lat. 30° N. and Long. I-22°. With these scientific data, we can identify the star *Prajāpati* with δ Aurigæ, and the star *Brahma-Hridaya*, also called *Brahma-hrit* (ब्रह्महृत्) by astronomical abbreviation, with α Aurigæ. We have it then, that the two stars *Prajāpati* and *Brahma-hrit* are in the constellation Auriga. These two stars exactly occupy the top and middle of the constellation Auriga, representing the head and heart of *Brahmā*.

Then again the course of the Heavenly Gaṅgā (आकाश गङ्गा) *i.e.*, the Milky Way, described in the Purānas, helps us in fixing the position of *Brahma Rāsi* exactly in the same place in the Heavens. Vide, Introduction. Ex I. We thus get the equation:

Brahma Rāsi = Auriga.

But the identification is not complete in all respects; for a complete history, we have to look to the Vedas.

To the western savants, the origin and character of Auriga do yet remain shrouded in mystery. They no doubt connect it with 'the Goat' and 'the Kids', but can give no reason for doing so. R. Brown has taken much pains to find out its antecedents, but he does not feel on *terra firma*. Vide, R. Brown. II, 51-2-118. One may learn something from the Vedas in which lies its background. When rightly understood, 'the

rustic songs' will unfold to the star-gazer a vast treasure of much valuable astronomical knowledge.

Of the God *Pushan*, the Vedas declare:

Pushan ! thou goest on an embassy to the Sun, in thy (stellar) golden boats that travel in the sky across the upper ocean.

याः ते पूषन् नावः अन्तः समुद्रे हिरण्ययीः अन्तरिक्षे चरन्ति ।
ताभिः यासि दूत्याम् सूर्य्यस्य ... ... ॥

Rv. VI. 58. 3.

Pushan is the world of Light. Vide:

वसोः राशिः ।

Rv. VI. 55. 3.

He has fine rays. Vide:

दस्मवर्चाः ।

Rv. VI. 58. 4.

He is yellowish like the Sun. Vide:

... द्यौः इव असि ।

Rv. VI. 58. 1.

Referring to the variations of his lustre, the Veda says:

His one form is bright, and the other is not of pronounced colour. Vide:

शुक्रम् ते अन्यत् यजतम् ते अन्यत् ... ।

Rv. VI. 58. 1.

As some of the stars, if not all of them, in this Mandala are called the Goats, *Pushan* is called *Ajāsva* (अजाश्व) lit. one who has goats for his steeds. Vide:

पूषणम् नु अजाश्वम् ... ।

Rv. VI. 55. 4.

आ अजासः पूषणम् रथे ... ।
देवम् वहन्तु बिभ्रतः ॥

Rv. VI. 55. 6.

Pushan is the guardian of the cattle and horses. Vide:

पूषा गाः अनु एतु नः पूषा रक्षतु अर्वतः ।

Rv. VI. 54. 5.

He is the lord of the (Sun's) Path. Vide

... पथः पते ... ।

Rv. VI. 53. 1.

The best charioteer has guided the (stellar) golden wheel of the Sun's car through the variegated (stellar) Bull.

उत अदः परुषे गवि सूरः चक्रम् हिरण्ययम् । नि ऐरयत् रथितमः ॥

Rv. VI. 56. 3.

The car of the Sun is his orb. Vide:

... सूर्य्यम् आ धत्थः दिवि चित्र्यम् रथम् ॥

Rv. V. 63. 7.

Cf. "Auriga is now known as 'the charioteer', although no chariot is visible, and in Ptolemy's Star-list, as well as in our modern representations, he is described in the attitude of a shepherd carrying a goat on his shoulder and a pair of little kids in his hand."

Maunder. p. 104-6.

The stellar isosceles triangle or the stellar arrow of the Rāmāyana, is called *Ārā* (आरा), the saw. The glowing *Pushan* holds the saw. Vide :

... आराम् विभर्पि आघृणे ।

Rv. VI. 53. 8.

Brandishing his lightly-moving goad, *Pushan* goes forth. Vide:

अष्ट्राम् पूषा शिथिराम् उद् वरीवृजत् ... ... ॥

Rv. VI. 58. 2.

As the constellation lies side by side with *Bhadrā*, the northern branch of the Milky Way (Vide, Introduction, Ex. I.) like husband and wife they form a pair.

'Let *Bhadrā*,' says Bharadvāja, 'be now a loving friend to thee.'

... ... भद्रा ते पूषन् इह रातिः अस्तु ॥

Rv. VI. 58. 1.

As the constellations Brahmā (*Pushan*) and Parasu-Rāma (*Indra*) are situated side by side, they are hymned together in the Vedas. Vide:

Rv. VI. 57.

"Goats are the team that draws the one, the other hath (two) Bay-steeds at hand.

With both of these he slays the fiends (*i.e.*, darkness)."

Prof. Griffith.

अजाः अन्यय वह्नयः हरी अन्यस्य सम्भृता ।
ताभ्यां वृत्राणि जिघ्नते ।।

Rv. VI. 57. 3.

Note : The two horses of *Indra-Parasu-Rāma*, are the two stars in the Nakshatra *Asvayujau* (अश्वयुजौ), the Twin Horses.

When *Indra*, wondrous strong, brought down the (encircling) streams, the mighty water floods,
Pushan was standing by his side.—Prof. Griffith.

यत् इन्द्रः अनयत् रित मही: अपः वृषन् तमः ।
तत्र पूषा अभवत् सचा ।।

Rv. VI. 57. 4.

STAR BRAHMA-HRIDAYA (ब्रह्महृदय तारा)

Lit. the Heart of *Brahmā*
Sum. Ak. *Askar* (The Goat). Ph. *Aiz.* (The Goat)
Sem. *Iqu.* (The gate star)
Gr. *Aix* (The Goat). Lat. *Capella*
Eng. The Goat Star

It is a star of the first magnitude and of yellow colour. It is the star 1 of *Brahmā* (=α Aurigæ).

The star 1 *Brahmānah* seems to be the battleaxe of *Pushan.* Vide:

"So, Lord of all prosperity, best wielder of the golden sword."—Prof. Griffith.

अध नः विश्व सौभग हिरण्य वाशीमत् तमः ।

Rv. I. 42-6.

Note : The stars, and especially the greatest stars are the important weapons of the Light-powers against Darkness. (R. Brown.)

Cf. Sk. *Svāti* = the Sword.

It is interesting to note that in Hindu astronomical myths, *Agni*, the goat-headed fire-god, is represented in the starry heaven by the star *Agni* (=2 *Vrishasya* = β Tauri = Nath), situated to the south of and in the same longitude with *Brahma-hridaya.*

अग्निः भूत्वा नैगमेयः छागववतृः वहुप्रजः ।

Mahā. III. 225, 28.

The star *Agni* is therefore connected with *Pushan's* flock of goats.

As regards the Semitic name of the star, we will presently show that *Vālmiki* seems to have taken the heaven's gate to be near the star.

Of the other important stars in this constellation, star 2 of *Brahmā* (=β Aurigæ) lies on the breast of *Brahmā* and we call it *Urah* (उरः) or 'the breast star'. Cf. Ar. *Menkalinan* (=the shoulder of the rein-holder).

RAMA-VANA (रामवाण)

Lit. the arrow of Rāma

Gr. *Eriphoi* (The Kids). Lat. *Haedi* (The Kids)
(Eng. The Kids)

The stars 6, and 8 of *Brahmā* (=η, ζ, Aurigæ) are called 'The Kids' in the West. Cleostratos (B.C. 548) placed them beside Aix. The Kids with 5 *Brahmānah*, form the figure of an arrow-head, 5 *Brahmānah* marking the point of the arrow. The position of the stellar arrow-head between the constellation Parasu (परशु) *i.e.*, Perseus of the West, and the star *Iqu* (=the Gate star), leads us to identify it with the famous *Rāma-Vāna* (रामवाण) *i.e.*, 'the arrow of *Rāma*', which was shot by *Sri-Rāma* at *Parasu-Rāma* to shut the latter out of the Heaven's gate.

"*Parasu-Rāma* said to *Rāma*, 'take this bow'." Vide:

धनुः आयच्छ राघव ।

Mahā. III. 99. 50.

"And Rāma took the celestial bcw." Vide:

रामः दाशरथिः दिव्यम् हस्तात् रामस्य कार्मुकम् ।

Mahā. III. 99. 51.

"Then *Para.u-Rāma* gave unto *Rāma* a celestial arrow saying 'place this on the bow-string and draw to thy ear'." Vide:

तस्य रामः ददौ दिव्यम् यामदग्न्यः महात्मनः ।
परम् आकर्णदेशान्तम् अयम् आकृष्यताम् इति ॥

Mahā. III. 99. 54.

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"By his superior refulgence *Rāma* overpowered *Parasu-Rāma* who lost his glory." Vide:

तेजोभिः गतवीर्य्यत्वात् यामदग्नः जड़ीकृतः ।

Rām. I. 77. 12.

Also,

निष्प्रभश्च रिपुरास भूभृतां धूमशेषः इव धूमकेतनः ।

Raghu. XI. 81.

"*Sri-Rāma* then shot the shaft." Vide:

ततः सः भगवान् विष्णुः तं वाणम् वै मुमोच ह ।

Mahā. III. 99. 61.

And it blocked his path to heaven.

भार्गवस्य सुकृतोऽपि सोऽभवत् स्वर्गमार्ग-परिघो दुरत्ययः ।

Raghu. XI. 88

"And he found his future heavenly abode undone." (*a*) Vide:

सः हतान् दृश्य रामेण स्वान् लोकान् तपसा अर्जितान् ।

Rām. 76. 22.

"And he exclaimed 'as I have no desire to satisfy, I do not feel for the loss of heaven'."

पीड़यिष्यति न मां खिलीकृता स्वर्गपद्धतिरभोगलोलुपम् ।

Raghu. XI. 87.

"After *Parasu-Rāma* had gone away, *Rāma* put the bow in the hands of the far-spreading *Varuna* (वरुण), the god of the firmament'." Vide:

गते रामे प्रशान्तात्मा रामः दाशरथिः धनुः ।
वरुणाय अप्रमेयाय ददौ हस्ते महायशाः ॥

Rām. I. 77-1.

"*Parasu-Rāma* afterwards regained his glory." Vide:

प्राप्तवान् च पुनः तेजः तीर्थे अस्मिन् पाण्डुनन्दन ।

Mahā. III. 99. 70.

The celestial 'Bow' could only be either the Rain-bow or the stellar bow in Parsu. The celestial 'arrow', primarily the rays of the Sun, is reduplicated in the asterism *Rāma-Vāna*. And

(*a*) Note :—*Indra* as a *Madhyasthāna Devatā* had no right to enter Heaven. Vide, the Nirukta.

the 'gate of heaven' is the Vernal Equinox guarded by the star *Agni* (2 *Vrishasya* = β Tauri) (*a*) which he reopens on the first day of every year. Cf. (Sem) *Iqu* (= Gate of Heaven), *i.e.* the star *Brahmahrit* (α. Aurigæ).

We know that *Sri-Rāma* is an incarnation of *Vishnu* (विष्णु). Vide:

कौशल्या अजनयत् रामम् दिव्यलक्षणसंयुतम् ।
विष्णोः अर्द्धं महाभागं पुत्रं ऐक्ष्वाकुनन्दनम् ॥

Rām. I. 18. 10-11.

And we know that *Vishnu* is the Sun. Vide:

एते विष्णोः आदित्यस्य नामनी ।

Nir. VI. 2. 37.

We also know that *Parasu-Rāma* is no other than *Indra* (इन्द्र) himself. (Vide, *Vithi* I, Parasu Mandala.)

Thus in this legendary tale, we get a satisfactory explanation as to why *Indra-Dhanus* (इन्द्रधनुः), the rain-bow, is popularly called *Rāma-Dhanus* (रामधनुः), and also a Paurānika explanation of the variable nature of the star *Māyā-vati* or Algol.

VRISHA RĀSI (वृषराशि)

Presiding deity : *Sukra* (शुक्र), Venus

The *Rāsi* forms the second division of the Solar Zodiac, and it lies east of Mesha Rāsi (मेषराशि). It consists of a part of Mesha Mandala and a part of Vrisha Mandala and it comprises the last three quarters of the Nakshatra *Krittikā*, the whole of Nakshatra *Rohini* and the first half of the Nakshatra *Mrigasirā*.

VRISHA MANDALA [127]

(वृष मण्डल)

Ak. *Gutanna* (= the Heavenly Bull). Ph. *Aleph*
Gr. *Tauros* Lat. *Taurus*
Sem. *Alap-samē*. Assy. *Alpu-samē*
Eng. The Bull Hindu Astrology. *Taburi* (ताबुरि)

The constellation has 44 stars visible to the naked eye. In this constellation we have the Nakshatras Krittikā (कृत्तिका) and

(*a*) Vide, *Agni tārā*, infra p. 88.

Rohini (रोहिणी), as well as some unformed stars. The razor shaped *Krittikās* form *Kakut* (ककुत्), the hump and the letter-V-shaped *Rohini*, the head of the stellar Bull. The Bull is alluded to in Rv. IV. 1, and VI. 56. Vide, p. 75.

KRITTIKĀ NAKSHATRA (कृत्तिका नक्षत्र)

Sk. *Mātri–Mandala* (मातृमण्डल)   Ak. *Mula* (= the star)

Euph. *Te* (= The foundation)

Chin. *Mao* (= Sun-open door)

Sk. *Bahulā* (बहुला)   Sem. *Aritum* (= The cluster)

Heb. *Kimah* (= family)

Gr. *Pleiades* (= numerous)

Lat. *Vergilæ* = (The stars of the branches)

Presiding deity : *Agni*, the Fire-god

Mātri-Mandala is the well-known star-cluster of over 400 small stars, out of which a group of stars varying from 6 to 8 in number, may be visible to the naked eye according to the strength of the observer's eyesight. But the group is so compressed that the unaided eye can hardly discern the constituent members of it.

It presents a hazy and blurred aspect to the observer without a reflector, but in autumn, when the sky is clearer the group presents a very charming sight, as it seems to emit waves of electric light in dark but cloudless nights.

Krittikā is the first *Nakshatra* of the Lunar Zodiac. The *Nakshatra* is said to consist of six stars in the shape of a fire-flame. Vide:

अग्निशिखाकृति षट्तारकामयम् ।

Kālidāsa.

The stars concerned are 16, 17, 18, 19, 20 and 21 *Vrishasya* (=20, 19, 16, 17, 23, 27 Tauri).

The Suryya Siddhānta puts the *Yoga-tārā* at Lat. 5°N. and Long. I.3°. But as to the identification of the star indicated, Colebrooke, Burgess and Bentley are not unanimous.

But there is another means of identifying the star. Elsewhere the Siddhānta says that the southern-most star of the group is the *Yoga-tārā*. Vide:

भरणी आग्नेय पित्र्याणाम् रेवत्याः चैव दक्षिणा ।

S.S. VIII. 18.

The Star 20 of Vrisha (=23 Tauri) is the southern-most star of the group and can therefore be safely accepted to be the *Yoga-tārā* of the asterism.

As the first *Nakshatra* of the Lunar Zodiac, while the Vernal Equinox (*a*) was in it, it ushered in the new year of the ancients, which was computed from the day of the full moon in this Nakshatra, and which was from that fact called the *Kārttikādi* (कार्त्तिकादि) year. For the same reason the Vedic month *Urjā* (उर्जा) was called *Kārttika* (कार्त्तिक), and the Moon was surnamed *Krittikā-bhaba* (कृत्तिकाभव), lit. the child of the *Krittikās*.

It is no wonder therefore that the asterism would be called *Mātris* in India, *Te* in Babylon, and *Ma-o* in China.

Bahulā (बहुला) seems to have been the original popular name for the asterism, and the names (Sem.) *Aritum*, (Heb.) *Kimah*, (Gr.) *Pleiades*, testify to that fact. The well-known nursery-tale about the seven *champā* (चम्पा) brothers and their sister *Karavi* (करवी), relates to this fine group of stars. "Other *Nakshatras*," says the Satapatha Brāhmana, "have one, two,

(*a*) The Vernal Equinoctial point was in *Krittikā* for the period of a thousand years from B.C. 2700 to B.C. 1700. As the sun attained *yasas* (यशः) or full strength and brilliancy on reaching the point in his northing, when the gate of heaven was re-opened for him to enter the Northern Hemisphere, he could be said, during the period, to be gifted with *yasas* by the *Krittikās* at his birthday, *i.e.* at the commencement of the

three or four stars, but the *Krittikās* have numerous stars (*i.e.*, six in number). It is therefore called *Bahulā* (बहुला", lit 'the numerous.' Vide:

एकम् द्वे त्रीणि चत्वारि इति वा अन्यानि नक्षत्राणि
अथ एताः एव भूयिष्ठाः यत् कृत्तिकाः ।

S.Br. II. 1.8.2.

Also,

अग्नये स्वाहा कृत्तिकाभ्यः स्वाहा ।

T.Br. III. 1.4.2.

The razor-like shape of the *Nakshatra* seems to have suggested the name *Krittikā* (कृत्तिका), lit. a cutting instrument, for the asterism.

In the Phænomena of the Greek astronomical Poet Aratos (B.C. 270), the Pleiades formed a separate constellation distinct from the stellar Bull. But in the Hipparcho-Ptolemy star-list (B.C. 150-A.D. 150) the Pleiades are included in the stellar Bull.

The above-mentioned historical facts give some clue to the name *Mātri Mandala* (मातृमण्डल), lit. the constellation of the mothers, which the *Krittikās* bear even to the present day. Vide:

अरुन्धतीम् ध्रुवम् चैव विष्णोः त्रीणि पदानि च ।
आसन्नमृत्युः न पश्येत् चतुर्थम् मातृमण्डलम् ॥

Sk. P. IV. 42. 12.

Aischylos (B.C. 525-456) alludes to the central position of the Pleiades in the Heavens ; and Euripides speaks of the 'Central Pleiades' in allusion to their position in the Heavens ; and they are regarded by Madler (A.D. 1846) as the central

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original solar year. Thus *Krittikā* came to be regarded as *Jasodā* (यशोदा) literally one bestowing *yasas* or brilliancy, the Paurānic mother of the Vedic Sun-God-*Krishna*, Vide :

यशोदाम् त्वा यशसि तेजोदाम् त्वा ।

T. Sam. IV. 4.7.3.

Also,

यत् एतत् आदित्यस्य कृष्णम् रूपम् ।

Chh. Up. III. 3.3.

group of the system of the Milky Way. The German astronomer also put forth an idea that there exists some central point in the universe, around which the Sun with its bevy of planets and comets, revolves in the course of millions of years ; and he suggested that such centre is situated in the direction of the star Alcyone (Sk. *Deva-Sena*) in the Pleiades.

Many are the legendary tales that exist about the *Krittikās* both in the East and in the West. For further particulars, Vide, supra. p. 26.

(2) NAKSHATRA ROHINI (रोहिणी नक्षत्र)

Gr. *Hyades* (The rainy ones)
Lat. *Pluviaē* (Pigs); *Suculac* (The piglings)
Vedic *Rohit (The female deer)*
Paurānik *Suravi* (सुरभि) (The celestial red cow)
presiding deity : Prajāpati (प्रजापति)

Rohini is the second *Nakshatra* of the Lunar Zodiac. In the Vedic age, the *Nakshatra* (asterism) had only a single star. Vide:

प्रजापतेः रोहिणी ।

T.Br. I. 5. 1.

प्रजापतये स्वाहा रोहिण्यै स्वाहा ।

T.Br. III. 1.4.2.

The stars 1,7,5,12,14 Vrishasya ($=\alpha,\epsilon,\theta,\gamma,\delta$ Tauri) form the *Nakshatra* (asterism). The asterism resembles a *sakata* (शकट), cart (a), or the letter V. We have seen that the *Yoga-tārā* of the *Nakshatra* is the star 1 *Vrishasya* ($=\alpha$. Tauri), which may be called *Rohit* (रोहित्). From the deep yellow or the reddish colour of the star, the Nakshatra is called *Rohini*. The Nakshatra is also called *Suravi*, the celestial red cow, in the Purānas. For further particulars, Vide, p. 34.

(a) पञ्चतारात्मिका शकटाकृतिः रोहिणी ।

Planets attaining Lat. 2°S. at Long. I. 17° are said to accomplish '*Sakata-bheda*' (शकट भेद) or the breaking of the cart. (S. S. VIII. 13). This incident is utilised as the *sakata-bhanjana-lilā* (शकट भञ्जन लीला) *i.e.*, cart-breaking labour of the Sun-God *Srikkishna* in the Purānas.

Note:—We have shown that in the Vedic age the Nakshatra had only a single star, and the star was *Rohit* (रोहित्) lit. the red she-deer of the Ait. Br ; and as the name *Rohini* has been transferred to the asterism, the *Yoga-tārā* may be called *Rohit.*

The *Nakshatra Rohini* had its reduplication in the Southern Hemisphere. It was reduplicated in the *Nakshatra Rohini*, now called *Jyeshthā*. Vide:

इन्द्रस्य रोहिणी ।

T. Br. I.5.4.

इन्द्राय स्वाहा ज्येष्ठाय स्वाहा ।

T. Br. III. 1.2.1.

Rohini is the consort of the Moon. Vide:

चन्द्रमसः रोहिणी ।

T. Ar. III. 9.

And as such, she became the mother of the planet *Budha* (बुध) Mercury, ealled *Rauhineya* (रौहिणेय) after her. Vide:

बुधः सौम्यः रौहिणेयः । इत्यमरः

But the Purānas attribute the birth of *Budha* to the illicit union of the Moon and *Tārā*, literally, the star, the abducted wife of *Vrihaspati*, the planet Jupiter.

The Paurānik story is evidently founded on Rv. X. 109 and Av. V. 13, where *Tārakā*, the wife of *Vrihaspati* is related to have been abducted by a man of the *Kshatriya* caste, but no mention is found of the birth of *Budha*.

STAR ROHIT (रोहित तारा)

Sum. Ak. *Bir.* (the vermilion)
Sem. *Aldebaran* (The follower, of Pleiades)
Lat. *Oculus Tauri* (The eye of the Bull)
Eng. Aldebaran

The star, as an asterism, was *Rohit* (रोहित्), the 'red deer' of the Ait. Br. and *Suravi* (सुरभि) of the Purānas.

याम् आहुः तारका एषा विकेशी इति ।

Av. V. 13. 4.

The Eng. name Aldebaran may be transliterated into Haladdi-varna (हलद्दीवर्ण).

STAR AGNI (अग्नि तारा)

Sem. *Al-natih* (the Butting)

Ar. *Kabdhi-l-inan* (the heel of the rein holder)

Eng. Nath

Of the remaining stars in Vrisha Mandala, the star 2 *Vrishasya* (= β Tauri) deserves particular mention. It is a star of the second magnitude, and it is called *Nath* (Sem. *Al-natih* = the butting) *i.e.*, one lying between the constellations Auriga and Taurus.

The S. Siddhānta calls it *Agni-tāraka* (अग्नितारक) and gives its Lat. 8°N and Long. I. 22°. Colebrooke identifies it with β Tauri.

Agni-tārā is famous for its nearness to the earliest known Vernal Equinox, which was to its South, and which the Fire-God had to guard. For further particulars, vide, Kāla-purusha Mandala.

STAR SVĀHĀ (स्वाहा तारा)

STAR 3 VRISHASYA = ζ TAURI

It is a star of the third magnitude and lies about 8 ft. S. E. of *Agni-tāraka*. We suppose that the star represents *Svāhā* (स्वाहा) the neglected wife of Agni (अग्नि), lit. the Fire-God.

Immediately to the N.W. of *Svāhā*, lies the Nebula M. 1, called the Crab Nebula, and to the south of *Svāhā* lies the Stellar Cock, both the objects being invisible to the naked eye.

The love-story of *Svāhā* and *Agni* and the birth of their son *Skanda* (स्कन्द) is narrated in Book III. of the Mahābhārata and in other Purānas. (Vide, Introduction, Ex. II.) The chief actors in this story are *Agni*, *Svāhā*, the *Krittikās*, *Kumāra-Skanda*, *Vinatā* and *Deva-senā*.

We have seen that the stellar reduplications of *Agni*, the *Krittikās*, *Vinatā*, and *Deva-Senā* are the stars 2, 16-21, 22 and 4 Vrishasya respectively. It now remains to identify *Kumāra-Skanda* and *Svāhā*.

Considering the positions respectively occupied by *Agni*, the *Krittikās*, *Vinatā* and *Deva-Senā* in the locality, it is but fair to presume that the star 3 Vrishasya (= ζ Tauri) would best represent *Svāhā*.

In Boiotia, the constellation Orion was called *Kandaon* (=the Prince). In Hindusthan *Kārttikeya* (कार्त्तिकेय) is called both *Skanda* and *Kumāra* (कुमार) (The Prince). We therefore get the equation:

Kumāra-Skanda = *Kanda-on*, the Prince.

4. GHATIKĀ MANDALA [50]

(घटिका मण्डल)

Lat. *Horologium*

This constellation was invented by La-Caille in 1752. We have translated the constellation name into Ghatikā Mandala.

5. SUVARNĀSRAMA MANDALA [55]

(सुवर्णाश्रम मण्डल)

Lat. *Dorado*. Eng. the Sword-fish

This constellation was invented by Bayer in 1664 A.D. To the east of the constellation Horologium, lies the Suvarnāsrama Mandala, so called from its gold-like yellow colour.

The star 4 Suvarnasya (=R. Doradus) is a very red star and a variable one, its magnitude varying from 5·0 to 6·5, *i.e.*, nearly to invisibility. This fact led us to call it Lopā-Mudrā (लोपामुद्रा), literally, the vanishing one.

Lopā-Mudrā was the daughter of *Vidarvarāja* (विदर्भराज), and the wife of *Maharshi Agastya* (अगस्त्य). *Lopā-Mudrā* (originally the Moon) is said to have been translated to the South Heaven by her Lord *Agastya* (The Sun-God) (*a*), and there lodged in a palace adorned with golden pillars (*b*). Vide:

(*a*) अगस्त्यः भगवान् विष्णुः । A.P. 206.1.
विष्णोः आदित्यस्यः । Nir. IV. 2.38.

(*b*) The original couple was the Sun (सूर्य) and the Moon (*Chandrā* चन्द्रा or *Chandramā* चन्द्रमा). Vide: Vithi. III. Mithuna Mandala.

इत्येवमुक्त्वा भगवान् जगाम दिशं सः यामीं सहसान्तरीक्षम् ॥
आक्रम्य तस्थौ सः हि तां तदाशाम् काले व्रजामि अत्र यदा मुनीन्द्रः ॥
तत्राश्रमं रम्यतरं हि कृत्वा संशुद्ध जाम्बूनद तोरणान्तम् ॥
तत्राथ निक्षिप्य विदर्भपुत्रीम् खमाश्रमं सौम्यमुपाजगाम ॥

Bām. P. 18.

The Sun and the Moon are reduplicated in the stars *Agastya* (Lat. Canopus) and *Lopā-Mudrā* (=the star R. Doradus) respectively.

6. ĀḌHAKA MANDALA [26]

(आढ़क मण्डल)

Lat. *Reticulum*

This constellation was invented by La Caille in 1752. We have simply translated the Constellation name.

VITHI III

The third *Vithi* comprises the following *Mandalas* or constellations.

1. Mithuna (मिथुन) (25)
2. Kāla-purusha (कालपुरुष) (38)
3. Sasa (शश) (12)
4. Kapota (कपोत)
5. Mriga-vyādha (मृगव्याध) (29)
6. Arnavayāna (अर्णवयान) (45)
7. Chitra-patu (चित्रपटु)
8. Abhra (अभ्र)
9. Chatvāla (चत्वाल)

MITHUNA RĀSI

(मिथुन राशि)

Presiding Divinity: *Budha* (बुध), Mercury.

This Rāsi is the third division of the Solar Zodiac. It lies to the east of *Vrisha Rāsi* (वृषराशि), and covers 30° of the Solar Zodiac. It consists of the eastern portion of the Vrisha (वृष), the northern portion of Kāla-purusha (कालपुरुष), and the western portion of Mithuna (मिथुन). The Rāsi is called after the Mithuna Mandala. It comprises altogether two and one-fourth Nakshatras of the Lunar Zodiac, *viz.*, the second half of the Nakshatra Mriga-sirā, the whole of the Nakshatra Ārdrā, and the first three quarters of the Nakshatra Punarvasu.

MITHUNA MANDALA [64]

(मिथन मण्डल)

Sum.-Ak. *Mastabba-galgal* (The Great Twins).
Sem. *Tuāme-Rabuti* (The Great Twins)
Gr. *Didymoi.* Lat. *Gemini.*
Eng. The Twins. Hindu Astrology. *Jituma* (जितुम).

The Mandala derives its name from the celestial pair, the Sun (male) and the Moon (female), who are reduplicated in the stars 2 and 1 Mithunasya ($=\alpha$ and β Geminorum).

The pair is said to be of human shape, one holding a club and the other a lyre. Vide:

मत्स्यौ घटी नृमिथुनम् सगदम् सवीणम् । (*a*)
चापी नरः अश्वजघनः मकरः मृगास्यः ॥
तौली सशस्यदहना प्लवगा च कन्या ।
शेषाः स्वनाम-सदृशाः खचराः च सर्व्वे ॥ Manohara.

Prajāpati, says the Prasna-Upanishad, created a pair, male and female. They, thought he, will multiply their race. The male was *Āditya* (आदित्य) the Sun, and the female was *Chandramāh* (चन्द्रमाः) or *Chandrā* (चन्द्रा) the Moon. Vide:

सः मिथुनम् उदपादयते ।
रयिम् च प्राणम् च इति ।
एतौ मे बहुधाः प्रजा करिष्यतः ।
आदित्यः ह वै प्राणः रयिः एव चन्द्रमाः । P. Up. I. 4.5.

Vide also, S. Yv. IV. 2. 1.

"The stars Castor and Pollux," says Maunder, "are shown as man and woman on many Zodiacs."

The pair was originally connected, we believe, with the birth of day and night, month and season, and a new year was brought about by their movements.

There are two Nakshatras in this constellation, *viz.*, *Invakā* (इन्वका) and *Punarvasu* (पुनर्व्वसु).

THE OLD NAKSHATRA INVAKĀ

(इन्वका नक्षत्र)

Presiding Deity : *Soma* (सोम), the Galaxy
Bab. *Kakkab khi-gall-a* (= the asterism-of-the-canal-of water)
Per. *Rakhvad* (the watery way)

The Nakshatra *Invakā* or *Ilvalā* (*b*) is defined to be made up of five stars lying above the Nakshatra *Mriga-sirāh* (मृगशिरा), the head of the *Mriga-kālapurusha*. Vide:

(*a*) As the *Āsvins* learnt *Madhu-vidyā*, (मधु विद्या), the instrumental music from Maharshi *Dadhichi*, they are represented with *Vinā* (वीणा) the lyre in their hands. For further particulars, Vide: *post*; Vinā Mandala. Cf *Lava-Kusa*.

(*b*) Both the names seem to be connected with a flight of herons, the Sk. words *Vaka* and *Vala* having cognate significations.

इल्वलाः मृगशिरः—शिरस्थाः पञ्चतारकाः ।
इति हेमचन्द्रः ।

The stars of the Nakshatra arrange themselves in the form of a flight of herons.

And no other five stars capable of forming the asterism in question, can be found in the locality, than the stars 7, 5, 3 and 6 *Mithunasya* and 3 *Vrishasya* ($=\gamma, \mu, \eta, \zeta$ Geminorum and ζ Tauri).

Ilvalā was a division of the archaic Lunar Zodiac of thirty Nakshatras. The Nakshatra had for its presiding deity *Soma-pavamāna* (=The Galaxy). Vide:

सोमस्य इन्वकाः विततानि । T. Br. I. 5. 1.
इल्वलाः सोमदैवत्याः रौद्रम् च आर्द्रम् उदाहृतम् ॥
A. P. I. 59. 2.

Ilvalā was an auspicious Nakshatra for bridegrooms. Vide:

इन्वकाभिः प्रसृज्यन्ते ते वराः प्रतिनन्दिताः ।
इति आपस्तम्वीय गृह्यसूत्रम् । २ । १६ ।

Vālmiki refers to the asterism as the bow of *Rudra*, placed by way of trust in the possession of King *Devarāta*, and broken into two pieces by *Rāma* as a price for *Sitā's* hand. Vide:

तत् एतत् देवदेवस्य धनूरत्नम् महात्मनः । १२
न्यासभूतम् तदान्यस्तम् अस्माकं पूर्व्वजे विभौ ॥ १३
Rām. I. 66.

पश्यताम् नृसहस्राणाम् बहूनाम् रघूनन्दनः । १६
तत् बभञ्ज धनुः मध्ये नरश्रेष्ठः महायशाः । १७
Rām. I. 66.

In the Mahābhārata, the asterism forms the golden umbrella of *Skanda*-Orion. Vide :

तत्र तत् काञ्चनम् छत्रम् ध्रियमानम् व्यरोचत ।
Mahā. III. 228. 23.

And its five stars are 'the five fires', protecting king *Vāna* (वाण), literally, 'the Arrow' ('*Ishu-Trikānda*') Vide :

ततः अग्नीन् भगवान् पञ्च जित्वा नीत्वा तथा क्षयम् ।
दानवानाम् बलम् विष्णुः चूर्णयामास लीलया ।
V. P. V. 33. 26.

The 7th asterism of the Euphratean Scheme of the Lunar Zodiac of thirty asterisms (*a*), is called *Kakkab Khigall-a*=the 'asterism-of-the-canal-of-water' (The Galaxy). 'The asterism', says R. Brown, 'consists of the stars η, μ, ν, γ, and ζ Geminorum' (the stars 7, 5, 14, 3 and 6 *Mithunasya*). But a similar enumeration of the Nakshatras found in Book III of the T. Br., tends to show that the asterism *Mriga-sirāh* was the third, while *Invakā* (*b*) the fourth asterism of the Hindu Lunar Zodiac. Vide:

मृगशीर्षाय स्वाहा । इन्वकाभ्यः स्वाहा ।

T. Br. III. I. 4. 2.

NAKSHATRA PUNARVASU

(पुनर्व्वसु नक्षत्र)

Presiding Deity : *Aditi* (अदिति) (*c*)

Euph. *Kakkab Su-pa* (the asterism of the lustrous one)
Euph. *Kakkab Ankiames* (= the asterism of Heaven and Earth)
Gr. *Dioskouroi* = *Kastor* and *Polydeukes*
Lat. *Castor* and *Pollux*

The Vedic name of this Nakshatra is *Punarvasu* (पुनर्व्वसू), *i.e.*, the dual of the word *Punarvasu* (पुनर्व्वसु), which implies, that the Nakshatra originally consisted of two stars. Vide:

अदित्यै पुनर्व्वसू ।

T. Br. I. 5. 7.

अदित्यै स्वाहा, पुनर्व्वसुभ्यां स्वाहा ।

T. Br. III. 1. 3.

The *Yoga-tārā* (योगतारा) or the head-star of the Nakshatra was the eastern one. Vide:

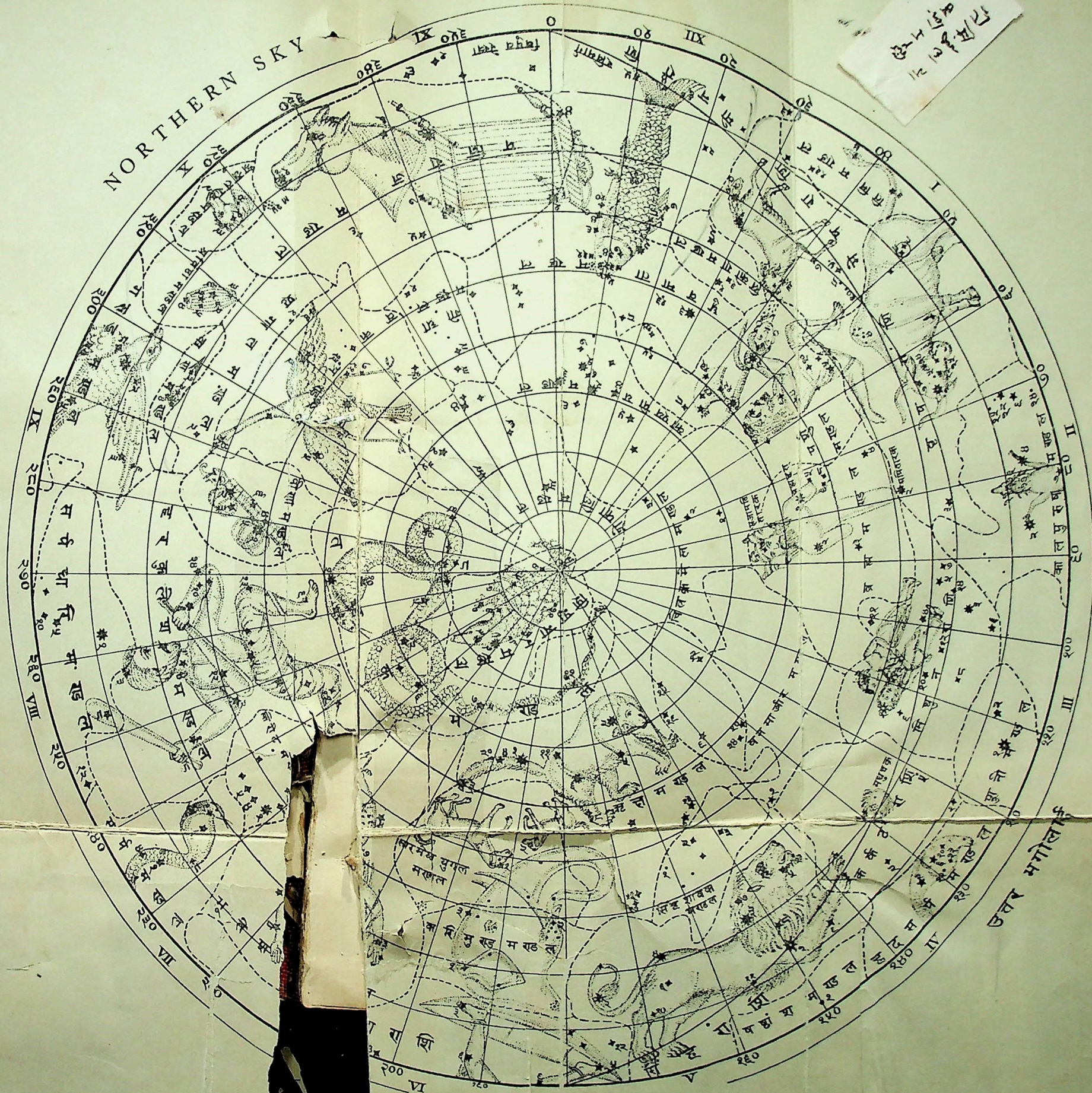
रोहिणी-आदित्य-मूलानाम् प्राची ।

S. S. VIII. 19.

(*a*) The 28 Nakshatras of the old Hindu Lunar Zodiac with the 2 old Nakshatras *Invakā*, and *Sārdula* might make up the thirty Nakshatras of the archaic Hindu Lunar Zodiac alluded to in Rv. X. 189.3.

(*b*) The *Invakā* may well represent the *Vaka-Asura* (वक-असुर), whom the noctural Sun-God *Srikrishna* had to kill.

(*c*) We have shown that, *Aditi* (= the undivided one) = *Suryyā* = the northern half of the Milky Way ; while another phase of *Aditi* or *Devaki* is the Goddess Earth herself. Vide: Nirukta.

NORTHERN SKY

The S. Siddhānta gives the latitude and longitude of the *Yoga-tārā*, *viz.*, Lat. 6°. N. and Long. III-3°; and Colebrooke has found it to be the star 1 *Mithunasya* (= β Geminorum = the star Pollux). The companion star is evidently the star 2 *Mithunasya* (= α Geminorum = the star Castor). Thus we identify the stars 1 and 2 *Mithunasya* with the two stars of the Nakshatra, as originally constituted. *Punarvasu* (पुनर्व्वसू) means a reduplication of two of the eight *Vasus* (*a*), *viz.*, of the Sun and the Moon, the Vedic *Asvinau* (अश्विनौ).

The stellar couple is either the Earth and Heaven (द्यावा-पृथिव्यौ), the Sun and Moon (सूर्याचन्द्रमसौ), the Wind and Fire (वायु+अग्नि = इन्द्र+अग्नि), or the day and night (अह:+रात्रम्). Each of these four couples is known as 'Dual *Devatās*' in the Vedas ; but of the four couples, the Nirukta enumerates the first, second and the fourth and not the third one, as *Asvinau*. Vide:

द्यावा-पृथिव्यौ अहोरात्रे सूर्य्या-चन्द्रमसौ वा
अश्विशब्द-अभिधेयौ ।

Nir. N. V. 6. 1.

We know that the Sun and the Moon are regarded as the two sons of *Aditi*. Vide :

तत्र त्वा आदित्यौ रक्षताम् सूर्य्याचन्द्रमसौ उभा ।

Av. VIII. 2. 15.

We therefore hold that the two stars 2 and 1 *Mithunasya* (= α and β Geminorum), represent the brothers, the Sun and the Moon in the Nakshatra *Punarvasu* (पुनर्व्वसू), while the same two stars, as we have seen, represent the pair Sun (male) and Moon (female) in Mithuna Rāsi.

We have thus the equation:

Punarvasu = *Asvinau* = the Sun and the Moon = Gr. *Dioskouroi* = *Kastor* and *Polydeukes* = Lat. *Castor* and *Pollux*.

(*a*) *Dhara*, *Dhruva*, the Moon, Sun, Wind, Fire, Night and Day. Vide:

धरः ध्रुवः च सोमः च विष्णुः च अनिलः अनलः
प्रत्यूषः च प्रभासः च वसवः अष्टौ इमे स्मृताः ।

इति भरतः ।

We have therefore named the yellow-coloured star 1 *Mithunasya, Soma* (सोम) *i.e.*, the Moon and the bluish-white-coloured (or the green-coloured) star 2 *Mithunasya, Vishnu* (विष्णु) *i.e.*, the Sun. For,

विष्णुः = आदित्यः ।

Nir. N. IV. 2. 37.

In other words as an asterism, the two stars are regarded as the brothers *Asvinau* or *Punarvasu*, and as the makers of the Mithuna Mandala, as *Āditya-chandramā* the couple, male and female.

It is to be remembered that the Nakshatra *Asvinau* alias *Punarvasu* of the *Deva-bhāga* (the Northern Celestial Hemisphere), is again reduplicated in the Nakskatra *Vichritau* (विचृतौ), alias *Mulā* of the *Asura-bhāga* (the Southern Celestial Hemisphere). It is also to be borne in mind that the *Mithuna Rāsi* of the *Deva-bhāga* is again reduplicated in the *Rāsi Minau* (मीनौ), Pisces of of the *Asura-bhāga*.

For further particulars, vide: Nakshatra Mulā and Rāsi Mina.

Modern astronomers have detached the star 2 *Mithunasya* (= α Geminorum) from the Nakshatra as originally constituted, and have added four stars to it ; thus, at present, the Nakshatra consists of five stars, which have arranged themselves in the shape of a bow. Vide :

मध्यवर्त्मनि शरासनाकृतौ अम्बरस्य सुरमातृभे गताः ।
लिप्तिकाः सुमुखि पञ्चतारके पञ्चपावकमिता धठोदयात् ।

Kālidasa.

So the Nakshatra consists of the stars 1, 8, 10 *Mithunasya* and 1, 2 of *Suni Mandala* (= β, λ, δ Geminorum and α, β Canis Minoris.)

In the west both the Nakshatra (asterism) and Mandala (constellation) are named after the same twin brothers.

'The original Twins,' says R. Brown, 'were the Sun and the Moon, who were reduplicated in the Zodiacal Gemini. In the Homeric account of *Kastor* and *Polydeukes*, they are said to be

alive alternately, *i.e.*, when the one is in the Upper-World of the living, the other is in the Under-World of the dead, Day and Night, the Sun and the Moon, as well as the Heaven and the Earth. Here then, we have the origin of the apparently singular expression 'asterism of Heaven and Earth' as applied to the stars α and β Geminorum. They represent, by virtue of the Law of Reduplication, two stars (Sun and Moon), which considered together occupied at the same time 'the Heaven and the Earth.' R. Brown I. 59.

The above would read as a very fine exposition of a passage in the Nirukta (Nighantu) already quoted. *Viz.*

द्यावापृथिव्यौ, अहोरात्रे, सूर्र्या-चन्द्रमसौ वा,
अश्वि शब्द-अभिधेयौ । Nir. N. V. 6. 1.

Of the unformed stars of Mithuna, 12 *Mithunasya* is an opera-glass double. It lies 2 ft. S. W. of *Anila* (8 Mithunasya = δ Geminorum).

Mithuna forms the home of the important Meteor-radiant of December 10 to 12.

2. KĀLA-PURUSHA MANDALA

(कालपुरुष मण्डल)

Rv. *Risya* (ऋश्य), the Deer Rv. *Varāha* (वराह), the Boar Presiding Deity: *Rudra*	Presiding Deity: *Prajāpati Soma* Heb. Yara and Ari Euph. *Yari* (Lord of the wild Boar)
Rv. *Apām-napāt* (अपाम् नपात्) (the son of the waters) Rām. *Gaṅgā-suta* (गङ्गासुत) (the son of *Gaṅgā*)	Zend. *Apām-napāt* (the son of waters) Sum. *Nin gir su* (Lord of the river bank) Lat. *Aquosus*
Rv. *Visva-rupa* (विश्वरूप) (the world's beauty) Rv. *Trisirāh* (त्रिशिरा:) (the three-headed)	Euph. *Tam-muz* Ak. *Duwuzi or Duzi* Gr. *Phaethon* (the shining); and *Orion* Lat. *Orion*
Mahā. *Skanda* (स्कन्द) *Kumāra* (कुमार) *Kārttikeya* (कार्त्तिकेय) *Visākha* (विशाख) *Bali* (बलि) (the strong) M.P. *Kumāri* (कुमारी) (the female warrior)	Gr. *Kandaon* (the Prince) Sem. *Kohain-dayan* (the prince—the Judge) Eg. *Sech* or *Sahu* (a wild hunter) Ph. *Kesil* (the strong) Heb. *Kesil* (the strong) Lat. Bellatrix
Hindu Astrology ..	*Kāla-purusha* (कालपुरुष)

The magnificent constellation of Kāla-purusha is a very beautiful assemblage of stars—mostly prominent—two of which are amongst the first 20 stars of heaven.

The Mandala is easily recognised by the three stars forming *'Ishu Trikānda'* (इषुत्रिकाण्ड) the three-knotted arrow of Mriga-vyādha (मृगव्याध), the Deer-hunter (vide, p. 31 *ante*).

We have shown (vide, pp. 31-33, *ante*) that the head of *Prajāpati-Mriga*-Orion forms the Nakshatra *Mriga-sirāh*, the third Nakshatra of the modern Luni-solar Zodiac. *Prajāpati* felt a passion for *Rohini* (रोहिणी) the Dawn, who is the wife of *Chandramāh* (चन्द्रमाः), the Moon. Vide:

चन्द्रमसः रोहिणी । T. Ar. III. 9.

It follows therefore that the Prajāpati in question is a variant of the Moon.

Cf. The goodliest of men (Od. XI. 310), Orion is beloved by Eôs (the Dawn) and slain by Artemis (the Lunar power). Vide, Od. V. 121 (R. Brown).

Orion has played the most important part in the legendary tales of the East as well as of the West. We have shown (vide, Introduction, Ex. III.) that in one of the Vedic narratives, the constellation represents the *Mriga-Mandala* (मृग मण्डल) called *Kāla-purusha Mandala* (a name of doubtful origin). Now let us examine other tales connected with the constellation.

APĀM-NAPĀT

(अपाम्-नपात्)

The celestial stream with one of its offshoots nearly surrounds the constellation. It is, therefore, called *Apām-napāt* (son of the waters). This offshoot is marked by a row of little stars arranged in a curve. That part of the Galaxy is also marked by a similar row of stars. Both the rows together form a bad capital Greek Omega (Ω). 'On every side,' says the Rig Veda, 'the bright Floods have encompassed the bright resplendent offspring of the Waters'—Prof. Griffith. Vide:

अपाम् नपातम् परितस्थुः आपः । Rv. II. 35. 3.

Note :—This stellar Omega resembles the peacock's tail spread out.

About *Apām-napāt*, the Rig Veda further declares :—

Golden in form is he, like gold to look on, his colour is like gold, the Son of Waters.

When he is seated fresh from golden birthplace, those who (bestow lustre) 'present their gold,' give food to feed him.

Prof. Griffith.

Vide:

हिरण्यरूपः सः हिरण्यसन्दृक् अपाम्-नपात् सः इत् उ हिरण्यवर्णः ।
हिरण्ययात् परि योनेः निसद्य हिरण्यदाः (*a*) ददति अन्नम अस्मै ।

Rv. II. 35. 10.

Note : हर्यते-दीप्यते यत् तत् हिरण्यम् । Nir.

"He is the lord of might among the mighty."

Prof. Griffith.

Vide :

सः दक्षाणाम् दक्षपतिः बभूव ।

Rv. I. 95. 6.

"The never sullen waters, youthful maidens carefully decking wait on him (the Prince) youthful."

Prof. Griffith.

Vide:

तम् अस्मेराः युवतयः युवानम् मर्मृज्यमानाः
परियन्ति आपः ।

Rv. II. 35. 4.

Note :

युवानम् = युवराजम् । इति सायणः ।

He is tall like a mountain.

I make (the head of the mountain-like tall one) "his back" to shine.

Prof. Griffith.

Vide:

सम् सानु मार्जमि ।

Rv. II. 35. 12.

(*a*) The Paurānic Yasodā (यशोदा)

He is very swift. 'The rapid son of waters.'

Prof. Griffith.

Vide:

अपाम्-नपात् आशुहेमा ।

Rv. II. 35. 1.

Agni, the son of the Waters, is borne by swift horses.

Vide:

मनः—जुवः वृषणः यम् वहन्ति ।

Rv. I. 186. 5.

The Zend Avesta puts the whole matter into a nut-shell and declares :—

"We sacrifice unto *Apām-napāt*, the swift-horsed, the tall, the shining lord, the lord of the females, we sacrifice unto the waters made by *Mazda* and holy."

Avesta Sirozah. II. 7.

It is interesting to observe that (the constellation of) *Apām-napāt* (Gr. *Aquosus*) otherwise the Celestial fire, is taken as the Sun by the commentators of the Vedas.

'Brown traces the name Orion to the Akkadian *Ur-ana*, "the Light of Heaven," a poetical and a most natural title for the brightest of all the stellar groups. He further thinks that the name was given, because the constellation was taken as a stellar reduplication of the great Light of Heaven, the Sun' (Maunder).

RUDRA (रुद्र)

Ak.. *Sib-zianna* As. *Ri'ubutsame*
(Shepherd of the life of heaven)

The constellation is also called *Rudra* (रुद्र) literally 'the crying one,' *i.e.*, the roaring Tempest God.

Cf. In the West, Orion was doleful. (ατυγνον). Vide: R. Brown 1. 142.

"*Rudra* excels all in glory (*a*) and is the oldest of the old men."

(*a*) 'Orion heads the whole orderly array of heaven.'

R. Brown. I. 256.

Vide:

श्रेष्ठः जातस्य रुद्र ! श्रिया असि तवस्तमः तवसां वज्रबाहो ।

Rv. II. 33. 3.

Note—From this fact might have originated the name *Kāla-purusha* in India.

He was the Lord of heroes. Vide:

... क्षयत् वीराय ... ... ।

Rv. I. 114. 1.

Cf. 'The mighty strength of Orion.'

(R. Brown I. 156).

'He shines in splendour, like the Sun, refulgent as bright gold is he.'

Prof. Griffith.

Vide:

यः शुक्रः इव सूर्य्यः हिरण्यम् इव रोचते ।

Rv. I. 43. 5.

Of all the stars he is supremely brilliant. Vide:

श्रेष्ठः देवानाम् (*a*) वसुः ॥

Rv. I. 43. 5.

Note.— *Rudra* (रुद्र), the stellar giant, presents to us a personification of *Hari* (हरि), the Sun.

... यः हरिः सः हरः स्मृतः ।

Var. P.

Rudra is called "The Celestial Boar".

"*Rudra* is the heavenly boar."

"Him with the braided hair, we call with reverence down, the wild boar of the sky, the red, the dazzling shape."

Prof. Griffith.

Vide:

दिवः वराहम् अरुषम् कपर्दिनम् त्वेषम् रूपम्
नमसा नि ह्वयामहे ।

Rv. I. 114. 5.

(*a*) As to, Deva = Star, vide:

देवः देवान् मर्चयसि ··· ।

Av. XIII. 1. 40.

"It is the Celestial Boar which gives chase to its immediate neighbour, the Great Dog. Vide:

त्वम् सूकरस्य दर्द्दहि तव दर्दर्तु सूकरः ।

Rv. VII. 55. 4

Cf. *Tammuz-Adonis* received his fatal wound when hunting the boar. Here we have, in original, the myth of the death of the Solar hunter stricken by the tusk of the Boar of Storm and Darkness (R. Brown).

'The tawny adorns himself with bright gold decorations.'

Prof. Griffith.

Vide:

बभ्रुः शुक्रेभिः पिपिशे हिरण्यैः ।

Rv. II. 33. 9.

From the three stars in his head, *Rudra* is called the three-eyed. Vide:

त्र्यम्बकम् यजामहे ।

Rv. VII. 59. 12.

Referring to the position of the star 16 *Mrigasya* (Φ Orionis) in his head, *Rudra* is called *Susipra* (सुशिप्र = हनुमान्), the high-cheeked. Vide:

बभ्रुः सुशिप्रः ।

Rv. II. 33. 5,

Alluding to the nebulous ring around the star 11 *Mrigasya* (λ Orionis) in the head of Orion, the Veda calls *Rudra*, *Kapardi* (कपर्दी), the man with the braided hair. Vide:

रुद्राय तवसे कपर्दिने ॥

Rv. I. 114. 1.

Alluding to the circle of little stars around the constellation, the Veda says :—

Worthy, thy (beautiful) 'many hued' and (dim) honoured necklace.

Prof. Griffith.

Vide:

अर्हन् निष्कम् यजतम् विश्वरूपम् ।

Rv. II. 33. 10.

As the constellation portends a great wind, *Rudra* is called the father of *Maruts* (मरुत्), the storms. Vide :

आ ते पितः मरुताम् सुम्नम् एतु ।

Rv. II. 33. 1.

Referring to the bow-shaped asterism *Ilvalā*, lying close to Kāla-Purusha, the Veda says:

Rudra ! firm is thy bow.

Prof. Griffith.

And probably referring to the sharp Meteor showers of November, called the Orionids, the Veda says:

'Rudra! with swiftly-flying shafts,'

Prof. Griffith.

Vide :

इमा रुद्राय स्थिरधन्वने गिरः क्षिप्रेषवे देवाय स्वधाव्ने ।

Rv. VII. 46. 1.

Rudra is a houseless wanderer. Vide :

त्वेषम वयम् रुद्रम् यज्ञसाधम् वङ्कुम् कविम्
अवसे नि ह्वयामहे ।

Rv. I. 114. 4.

In the Constellation *Rudra*—Orion, we have the Nakshatra '*Bāhu*' (बाहू), literally 'the two arms.' Vide, post.

VISVARUPA (विश्वरूप)

The most glorious constellation of the sky is naturally named *Visvarupa* (विश्वरूप), 'the sum total of the world's beauty'. And from the three stars 11, 16, 17 *Mrigasya* (λ Φ^1 Φ^2 Orionis) marking his head, *Apām-napāt* derived one of his names *Trisirāh* (त्रिशिराः), 'one with three heads'.

The Heavenly priest *Brihaspati* (बृहस्पति) Jupiter, says the S. Bh., having been insulted by *Indra*, king of the Gods, vanished

from heaven. The absence of the Leader of the divine host from heaven emboldened the *Asuras*, who under the guidance of their priest *Sukra* (शुक्र) Venus, overpowered the *Devas*. The Gods headed by *Indra*, elected *Visvarupa*, son of *Tvashtā* (त्वष्टा) *lit.* the carpenter of the world, to the priestly office fallen vacant thereby. *Visvarupa* subdued the *Asuras* led by their priest *Sukra*. *Indra* afterwards suspected the new priest's fidelity and cut off his head (vide: S. Bh. VI 7-9).

The whole of this long story is based on the Hymns 9 and 99, Book X of the Rig-Veda.

'*Indra* struck the roaring demon (*Visvarupa* = *Rudra*), and to subdue the six-eyed and three-headed one (*Trisirāh*), lent his might to *Trita* who tore off the boar into pieces with his sharp-nailed finger.' Vide :

सः इत् दासम् तुवीरवम् पतिः दन्, षट् अक्षम्
त्रिशीर्षाणम् दमन्यत् ।
अस्य त्रितः नु ओजसा वृधानः विपा वराहम्
अयः–अग्रया हन् ।

Rv. X. 99. 6.

'*Indra*, who raised a loud noise around the cattle of *Visvarupa*, son of *Tvashtā*, cut down the demon's head looking upward and full of valour and glory. And his three heads hang down (*a*). Vide:

भूरि इत् इन्द्रः उत्–इ-नक्षन्तम् ओजः अव अभिनत्
सत्पतिः मन्यमानम् ।
त्वाष्ट्स्य चित् विश्वरुपस्य गोनाम् आचक्राणः
त्रीणि शीर्षा परा वर्क् ।।

Rv. X. 8 9..

Note :—Mark, how graphically the Rishi describes the head of Orion, inclined to the right.

Cf. Phaethon (the shining), son of Helios (Sun) and Clymene, was so presumptuous as to request his father to drive the chariot of the Sun across the heaven for one day. But he

(*a*) A complete story of *Visvarupa-Trisirāh* is given in the Sr. Bh. Vide: Sr. Bh.

being too weak to check the horses, they rushed out of their track. Thereupon Zeus killed him and hurled him down into the river Eridanus.

In the Mahābhārata, the Vedic *Apām-napāt, Visvarupa, Trisirāh-Rudra,* all reappear in the single character of *Skanda.*

In the Euphratean sphere, according to Prof. Sayce, *Tam-muz* (Ak. Duwu-zi) represented Orion. *Tam-muz* is identical with the Sun-Divinity *Nin-gir-su* (the Lord of the river bank). *Tam-muz—Nin-gir-su* received his fatal wound just as Phaethon perished in the Eridanus.

R. Brown I. 92-3.

SKANDA (स्कन्द)

The Mandala further represents *Skanda* (स्कन्द) *alias Kārttikeya,* the generaslissimo of the celestial army.

The birth of *Kumāra Skanda* has been related in the Introduction (vide pp. 27-31, ante). The boy was named *Kārttikeya* (*a*) after the *Krittikās,* his foster mothers. We now resume the story given in the Mahābhārata.

"Being surrounded by masses of red clouds flashing for the lightning, the boy shone like the Sun rising in the midst of red clouds."

P. Roy's Mahā. III. 224. 19.

(*a*) Vide:

तम् कुमारम् ततः जातम् स-इन्द्राः स-मरुद्गणाः
क्षीर-सम्भवनार्थाय कृत्तिकाः समयोजयत् ।

Rām. I. 38. 23.

अपत्यम् कृत्तिकानाम् च कार्त्तिकेयः ततः स्मृतः ।

PP. I. 6.

Cf. Maia (20 Tauri=16 *Vrishasya),* daughter of Atlas (Sk. अतलः) and Pleone, was the eldest of the Pleiades and the most beautiful of the seven sisters. Arcas (Sk. *Arkah,* अर्कः), the son of Zeus by Kallisto was given to her to be reared.

W. Smith.

The boy discharged his arrows at the white mountain (The Galaxy).

P. Roy's Mahā. III. 224. 33.

Maharshi *Visvāmitra* (The star Lubdhaka) performed his natal and other ceremonies.

P. Roy's Mahā. III. 225. 13.

The *Mātrigana* (मातृगण), literally the mothers (of the Universe) (*a*), were sent to kill him. But when they approached the boy they took pity on him, and offered themselves to nurse and suckle him. They asked him to become their son and they said, 'Lo ! the milk oozes from our breast' (originating the Milky Way).

P. Roy's Mahā. III. 225. 21-23. (*b*)

The Vedic God *Agni* (*Pushan*) came in the guise of a goat with his kids and dallied with him.

P. Roy's Mahā. III. 225. 24. (*c*)

Sakra (शक्र) *i.e.*, *Indra* hurled his thunderbolt at *Skanda.* And there arose from Skanda's body a youth with a club in hand (*d*), who was named *Visākha* (विशाख).

P. Roy's Mahā. III. 226. 14-17.

Honoured by the Maharshis, he looked grand. The golden umbrella held (over his head) looked like a halo of blazing fire. That bright God, the conqueror of *Tripura*, himself fastened the celestial wreath of gold of *Visva-Karmā's* manufacture round the child's neck.

P. Roy's Mahā. III. 228. 22-25.

That boy was appointed the generalissimo of the celestial army, and the red cock presented to him by *Agni* became his ensign, and he married *Deva-senā* (देवसेना), the star Alcyone,

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(*a*) They represent one of the phases of the *Krittikās*.

(*b*) Cf. Madler's theory about the Milky Way.

In the Sk. Edition of the Mahābhārata in our possession the text for the last three lines does not occur. We therefore quote Vālmiki on the point.

प्रादुर्भूतम ततः क्षीरम् कृत्तिकानाम् अनुत्तमम् ।

Rām. I. 37. 28.

(*c*) *Agni* here stands for *Pushan*, the presiding deity of Brahma Mandala.

(*d*) Orion of the Greeks has a club in hand.

(Mahā. III. 228. 32-47) lying at the central point of the Universe and representing the whole stellar system.

Then a fiery and powerful being came out of the body of *Skanda*. The great deity fell down to devour the children of men (*a*). *Skanda-apasmāra* is the name by which the planet is known to the best of the Brāhmins (*b*).

P. Ray's Mahā. III. 229. 24-25

The terrific star *Sakuni* is called *Vinatā*. The monster called *Putanā* is the star *Putanā*.

P. Roy's Mahā. III. 229. 26.

Suravi, said to be the mother of the bovine kind, and *Saramā*, the mother of the canine species, with others of that class, are the eighteen evil Heavenly bodies fond of meat and wine.

Mahā. III. 229. 33. 36.

They all followed him.

Skanda replied to *Svāhā*, 'Excellent lady ! in this way *Agni* shall always live with thee !'

Mahā. III. 230. 6.

Then *Brahmā*, the lord of creatures, said to the great general, 'Do thou go and visit thy father *Mahādeva*, the conqueror of *Tripurā*'.

Mahā. III. 230. 8.

'Be it so' ; so saying, the high-souled great soldier with fatherly love, honoured his father *Mahādeva*.

Mahā. III. 230. 13.

(*a*) It is the planet *Aṅgaraka* (Sk. *Māra* = Lat. Mars). This star (Mars), says Dr. Lacouperie, is named in Central Asia and Persia, *Ker wan kush* (the grave-digger of the caravans), because as long as the caravans observe its rising with Orion in the morning, robberies and death follow the stations. R. Brown.

Cf. The birth of Virabhadra (vide ante, pp. 61-62).

(*b*) *Skanda-Kandaon*—Orion is therefore said to be the patron divinity of the planet *Maṅgala*-Mars. Vide:

स्कन्दाभिदैवतम् भौमम् क्षितिप्रत्यभिदैवतम् ।

ग्रहयागतत्त्वम् ।

The white mountain shone with blossoming trees of *Santānaka* and *Karavira*, as well as with celestial birds, when that great son of the Fire-God was associated as the leader of the celestial army.

Mahā. III. 230. 22-24.

Hara with his consort *Pārvati*, in a chariot shining with sun-like refulgence, repaired to the tree called *Bhadra-bata* (*a*).

Mahā. III. 230. 27.

With these words *Maheswara* received him (*Skanda*) in his embrace and then dismissed him.

Mahā. III. 230. 57.

The firmament with stars was in a blaze, and the whole universe in a state of utter confusion and darkness over-spread the whole world.

Mahā. III. 230. 58-59.

Hard-pressed by the *Dānavas*, the celestial troops turned their back.

Mahā. III. 230. 65.

Then *Mahisha* with the *Dānavas* struck terror into the hearts of the Gods.

Mahā. III. 230. 84.

The mighty general, O King ! discharged a javelin ; the missile cut off the head of *Mahisha*.

Mahā. III. 230. 94-95.

Skanda has thousand arms (*b*).

Mahā. III. 231. 13.

And he rides on a peacock.

Suvarna presented him a peacock.

Mahā. XIII. 86. 21.

Cf. "He (*Kārttikeya*) is represented as riding on a peacock, indicating thereby that he is the head and all the planets and stars are in his train."

J. Bentley.

(*a*) Or the *Akshaya-bata* (अक्षयवट). For further particulars, see Vithi. VII. Tulā Rāsi, *post*.

(*b*) Hence we have *Vāna-rāja* with thousand arms and King *Kārttaviryya* with thousand arms. One was killed by *Parasu-Rāma* (*Indra*, the thunderer), and the other by *Srikrishna* (the Solar God, *Indra*).

Vide :

लोहिताभ्रेण महता संवृतः सहविद्युता ।
लोहिताभ्रे सुमहति भाति सूर्य्यः इव उदितः । ३।२२४।१९
धनुः निकृष्य व्यसृजत् बाणान् श्वेते महागिरौ । ३।२२४।३२
जातकर्म्मादिकां तस्य क्रियां चक्रे महामुनिः । ३।२२५।१३
कामवीर्य्याः घ्नन्तु चैनं तथा इति उक्त्वा ताः ।
ययुः तं अप्रतिबलं दृष्ट्वा विषण्णवदनाः तु ताः ।।
* * * *

उचुः च एनं त्वं अस्माकं पुत्र भव महाबल ।
अभिनन्दस्व नः सर्व्वा प्रस्नुताः स्नेहविक्लवा । ३।२२५।२१-२३
अग्निः भूत्वा नैगमेयः छागवक्त्रः वहुप्रजः ।
रमयामास शैलस्थं बालं क्रीडनकैः इव । ३।२२५। २८
* * * * वज्रम् शक्रः न्यपातयत् । ३।२२६।१४
वज्रप्रहारात् स्कन्दस्य सञ्जातः पुरुषः अपरः ।३।२२६।१६
यत् वज्र विशानात् जातः विशाखः तेन सः अभवत् ।
३।२२६।१७

अतीव शुशुभे तत्र पूज्यमानः महर्षिभिः ।
तत्र तत् काञ्चनम् छत्रम् ध्रियमानम् व्यरोचत ।। ३।२२८।२३
यथैव सुसमिद्धस्य पावकस्य आत्ममण्डलम् ।
विश्वकर्म्मकृता च अस्य दिव्यमाला हिरन्मयी ।। ३।२२८।२४
आवद्धा त्रिपुरघ्नेन स्वयम् एव यशस्विना । ३।२२८।२५
सः अभिषिक्तः मघवता सर्व्वैः देवगणैः सह ।। ३।२२८।२३
कुक्कुटश्च अग्निना दत्तः तस्य केतुः अलङ्कृतः । ३।२२८।३२
एवमुक्तः स जग्राह तस्या पाणिं यथाविधि । ३।२२८।४७
ततः शरीरात् स्कन्दस्य पुरुषः पावकप्रभः ।
भोक्तुम् प्रजाः सः मर्त्यानाम् निष्पपात महाप्रभुः । ३।२२९।२४
स्कन्देन सः अभ्यनुज्ञातः रौद्ररूपः अभवत् ग्रहः ।
स्कन्दापस्मारम् इति आहुः ग्रहं तं द्विजसत्तमाः ।। ३।२२९।२५
विनता तु महा रौद्रा कथ्यते शकुनिग्रहः ।
पूतनां राक्षसीं प्राहुः तं विद्यात् पूतनाग्रहम् । ३।२२९।२६
गवां माता तु या प्राज्ञैः कथ्यते सुरभिः नृप । ३।२२९।३२
सरमा नाम या माता शुनां देवी जनाधिप । ३।२२९।३३
इमे तु अष्टादशाः अन्ये वै ग्रहाः मांसमधुप्रियाः । ३।२२९।३६
एवं अग्निः त्वया सार्द्धं सदा वत्स्यति शोभने । ३।२३०।६
ततो ब्रह्मा महासेनं प्रजापतिः अथाब्रवीत् ।
अभिगच्छ महादेवं पितरं त्रिपुरार्द्दनम् । ३।२३०।८

एवं अस्तु इति च अपि उक्त्वा महासेनः महेश्वरम् ।
अपूजयत् अमेयात्मा पितरं पितृवत्सलः । ३।२३०।१३
सन्तानकवनैः फुल्लैः करवीरवनैरपि ।
दिव्यैः पक्षिगणः चैव शुशुभे श्वेतपर्व्वतः । ३।२३०।२२–२४
यदा अभिषिक्तः भगवान् सेनापत्येन पावकिः ।
तदा संप्रस्थितः श्रीमान् हृष्टः भद्रवटं हरः ।
रथेन आदित्यवर्णेन पार्व्वत्याः सहितः प्रभुः । ३।२३०।२७
इति उक्त्वा विससर्ज्ज एनं परिष्वज्य महेश्वरः । ३।२३०।५७
जज्वाल खं सनक्षत्रं प्रमूढं भुवनं भृशम् । ३।२३०।५८
तमोभूतं जगत् वभौ । ३।२३०।५९
दानवैः अर्दितं सैन्यं देवानां विमुखं वभौ । ३।२३०।६५
अथ तैः दानवैः सार्द्धं महिषः त्रासयन् सुरान् । ३।२३०।८४
मुमोच शक्तिं राजेन्द्र महासेनः महावलः ।
सा मुक्ता अभ्यहरत् तस्य महिषस्य शिरः महत् ॥ ३।२३०।९४-९५
सहस्र वाहुः । ३।२३१।१३
शिखिवाहनः । ३।२३१।१३
सुवर्णः अस्य ददौ पुत्रम् मयूरम् चित्रवर्हिणम् । १३।८६।२१

The stellar warrior is double-phased as (1) *Kumāra*, the God of War and (2) *Kumāri*, the Goddess of War. The Mārkandeya Purāna gives a fine graphic description of *Kumāri*.

'I bow down to *Kumāri* encompassed by the Cock and the Peacock,' Vide:

मयूरकुक्कुटवृते महाशक्तिधरेऽनघे ।

The Chandi.

Cf. The star 4 *Mrigasya* (γ Orionis) is called Bellatrix (the female warrior) in the West (*a*).

One who carefully observes the Constellation Orion, and takes note of the fact that in its vicinity shine the star *Agni*, the stellar cock (*b*), and the star *Svāhā* (स्वाहा) as well as

(*a*) As the divinity of the constellation appears to have combined both the male and female potentialities, it may well illustrate the androgynous concept of the Moon as *Hara-Gauri* (हरगौरी), which in modern times is interpreted as 'half male—half female,' in the Purānas, and that of Venus as *Sri* and *Sukra*, the Goddess of Love and the God of war.

(*b*) In classical times Orion was popularly called 'Cock's foot.' Vide, R. Brown 1.82.

Somadhārā (सोमधारा) the Galaxy, surnamed *Putanā* (पूतना) in the Purānas, and that the cluster of 400 little stars called the *Mātri Mandala* (मातृ मण्डल) *i.e.*, the Pleiades including the stars *Deva-Senā* (देवसेना), *Vinatā* (विनता) and the six wives of the Saptarshis (सप्तर्षि), blaze to its west, and that the stellar cow *Suravi* (सुरभि) represented by the asterism *Rohinī* glitters to its N.-W., and also that the star *Saramā* (सरमा) Procyon sparkles to its west, and the star *Lubdhaka* (लुब्धक) *alias Visvāmitra* (विश्वामित्र) burns to its S. E., and that it lies close to the Galaxy, which with one of its offshoots encompassess the constellation, cannot but be struck at the close and vivid resemblance, the surroundings of the Mandala bear to the elaborate description of the army of *Kārttikeya,* marching upon *Mahishāsura,* the Darkness, as given in the Great *Mahābhārata.*

One cannot pass over the broad hint given to him by *Vālmiki* about the stellar embodiment of *Skanda*, when the poet states that 'those who have faith in that God shall hereafter enjoy his company.' Vide:

भक्तः च यः कार्त्तिकेये काकुत्स्थ भुवि मानवः।
आयुष्मान् पुत्रपौत्रैः च स्कन्द सायुज्यताम् व्रजेत् ॥

Rām. I. 37. 32.

And when he notes the fact that the five stars of *Ilvalā* may well represent the umbrella, and the balloon-shaped row of stars round the constellation, the golden wreath of *Kānta* (कान्त) (*lit.* the beautiful) (*a*), and when he further notes the similarity of the death met with both by Phæthon-Orion and *Visvarupa-Kārttikeya* (*b*), and that *Kumāra* rises with the seven mothers (the Galaxy) (vide, Rv. VIII. 96. 1), he cannot but conclude that the original of *Kārttikeya* is surely to be found in the sidereal heavens.

This is a curious instance of how easily legendary history may turn astronomical myths to its greatest advantage.

(*a*) *Kānta* (कान्त) is one of the names of *Kārttikeya.*

(*b*) The Poet narrates *Skanda's* death rather in mysterious language.

VĀNA-RĀJA

We may add that the constellation seems to represent also *Vāna-Rāja* (वाणराज) literally 'the Arrow-king' (*a*), of the Vishnu Purāna, Srimat Bhāgavat and Hari-vamsa. King *Vāna*, says the Vishnu Purāna, was a protege of the *Deva Rudra* (*b*). His daughter *Ushā* (उषा) had *Chitra-lekhā* (चित्रलेखा) for her companion and *Anirudha* (अनिरुद्ध) for her beloved. *Vāna-Rāja* was destined not to succumb to his enemy, till his ensign the Peacock-tail, and his vanguard, 'the five fires,' vanished away. *Sri-Krishna,* the Sun-God, cut off the ensign of King *Vāna*, and put out 'the five fires'. '*Trisirah*,' the three-headed general of *Rudra* (= Orion), bravely fought to protect *Vāna*. *Vāna* hurled the weapon *Brahmasirah* at *Sri-Krishna*. Both *Rudra* (रुद्र) and *Kārttikeya* gave battle to *Sri-Krishna*, who threw his *Sudarsana Chakra* (सुदर्शन चक्र) at King *Vāna*. The *Chakra* cut off his thousand arms, and was about to kill him, when at the intercession of *Rudra*, *Sri-Krishna* pardoned him.

V.P. V. 32-33.

In this narrative:

'*Vāna-Rāja*=the arrow of *Deva Bhutavat* of the Aitareya Brāhmana (*i.e.*, 'the belt of Orion', of the Western charts).

Rudra=Orion.

'Peacock tail'=the Ω shaped starry environment surrounding the Constellation Orion.

'Five fires'=the five stars of the Nakshatra *Ilvalā*.

'*Trisirah*'=the three-headed Orion.

Brahma-sirah (ब्रह्मशिर:)=the head of *Brahmā-Prajāpati*=the asterism *Mrigasirā*.

'*Kārttikeya*'=Orion.

'*Sri-Krishna*'=the Presiding deity of the nocturnal Sun.

'*Sudarsana Chakra*'=the Solar Orb.

(*a*) *Ishu-Trikānda* (इषु त्रिकाण्ड:) of the Ait. Br. otherwise *Pāsupata Vāna* (पाशुपत वाण:) of the Puranas. seems to be impersonated in Vāna-Rāja.

(*b*) In fact the arrow was his own.

KĀRTTA-VIRYYA.

Another legendary hero *Kārtta-viryya,* who kept *Rāvana,* the king of the demons, in confinement and who was killed by *Parasu Rāma* in revenge for his father's death, seems to be represented by this constellation. In commemoration of all these legendary tales we call :

The star 1 (β Orionis), *Vāna-Rāja,*
The star 2 (α Orionis), *Visākha* (विशाख),
The star 3 (ϵ Orionis), *Aniruddha,*
The star 4 (γ Orionis), *Kārttikeya,*
and the nebulous star 18 (θ^1 Orionis), *Skandāpasmāra* (*a*).

VALI (वलि)

Lit. The strong, the mighty man.

Orion also represents *Vali,* once the king of heaven (*b*), whose liberality is proverbial.

That *Vali* is a heavenly luminary, appears pretty clear from various passages in the Mahābhārata. *Vali* says to *Indra,* 'Your three worlds I do light'. Vide:

तव–अपि च एव त्रैलोक्यम् विद्योतामि अहम् एव च ।

Mahā. XIV. 224. 83.

Vali abdicated his heavenly throne out of his own free-will and now clad in an asinine skin lived in the sky ; vide:

ततः ददर्श सः वलिम् खरवेशेन संवृतम् ।
* * * शून्यागारे कृतालयम् ॥

Mahā. XIV. 223. 12

(*a*) The planet *Angāraka* (अङ्गारक) is represented in the Sidereal Heavens by this Nebulous star.

(*b*) Like *Skanda, Vali,* the king of the heaven, is said to be adorned with the umbrella and necklace. Vide :

न ते पश्यामि भृङ्गारम् न छत्रव्यजने न च ।
ब्रह्मदत्तम् च ते माल्यम् न पश्यामि, असुराधिप ।

Mahā. XIV. 223. 23.

and in the midst of a cave, vide

यदा अतिष्ठः समुद्रस्य पूर्व्वकुले बिले लिहन् ।

Mahā. XIV. 223. 17.

where he hoarded up all his treasures.

गुहायाम् निहितानि त्वं मम रत्नानि पृच्छसि ।

Mahā. XIV. 223. 25.

Vali was adorned with a necklace. Vide:

ब्रह्मदत्तम च ते माल्यं न पश्यामि असुराधिप ।

Mahā. XIV. 223. 23.

The celestial pea-hen was with him.

वले का इयम् अपक्रान्ता रोचमाना शिखण्डिनी

त्वत्तः स्थिता सकेयूरा दीप्यमाना स्वतेजसा ।

Mahā. XIV. 225. 3.

Note :—This pea-hen is a reduplication of the northern pea-hen (Ursa major).

Vali (वलि), *lit* 'the mighty,' King of the *Asuras* and son of *Virochana* (विरोचन) the planet Maṅgala—Mars, was a familiar figure in the West. The great Boeotian poetess Korinna (B.C. 500), conqueror of Pindar, hymned the mighty hero Orion 'as a noble and pious man'.

R. Brown. I. 144.

In the Kendalion of Sophokles of Colonus (B.C. 495), Orion appeared with the Dwarf on his shoulders (R. Brown). But the scientific explanation of all the myths about the Dwarf, Sun-God, and the mountain-like tall and mighty hero *Vali*-Orion is found in the sacred books of the East.

We have said that *Svarga-dvāra* (स्वर्गद्वार), the door of heaven (the Vernal Equinox), was between the stars *Svāhā* (ζ Tauri) and *Agni* (β Tauri) about B.C. 3725.

Agni, the Fire-God (=Orion) guarded the door. '*Agni!*' says the Rig-Veda, 'throw open the door of heaven.' Vide:

वि श्रयन्ताम्...द्वारः देवीः......।

Rv. I. 13. 6.

Cf. "The southern gate Orion holds". (Claudian Smyth).

And again, 'the mountain-like tall *Agni,*' says the Mahābhārata, 'stood in the way of the *Pāndavas*, while ascending the heavens'. Vide:

अग्निम् ते ददृशुः तत्र स्थितम् शैलम् इव अग्रतः ।
मार्गम् आवृत्तय तिष्ठन्तम् साक्षात् पुरुषविग्रहम् ॥

Mahā. XVIII. 1. 35.

The Sun at the Winter Solstice cannot stretch his feet (rays) (*a*) to the North Polar region. This fact makes him a dwarf.

When the Dwarf, Sun-God, reached the Heaven's door in his northerly course, he became powerful enough to give light to both the Poles of the Earth simultaneously; in other words, while at the Vernal Equinox, his left foot is stretched to the North Pole and his right foot to the South Pole of the Earth, while a third foot (?) on the head of *Vali*—Orion. This plain astronomical phenomenon gave rise to the famous story of the pious *Vali's* making a free gift of the three worlds to the Dwarf *Vishnu*, the Solar God, who appeared at his gate as a beggar.

The Vedic *Svarga-dvāra*, the Vernal *Krānti-pāta* (क्रान्तिपात) or the Equinox of the astronomers, was surnamed *Vali-dvāra* (वलिद्वार) or Orion's Gate.

The last mention of *Vali-dvāra* is found in connection with the liberation of *Kali* (कलि), the regent of Kali-yuga (कलियुग), the Iron Age, who in the disguise of a *Mesha*, had been tied in the abode of *Vali*, at his gate and was let loose by him on the advent of *Kali*.

Note—The stellar *Mesha* was to the South of the Celestial Equator, or in other words, in the Southern Celestial Hemisphere, called the *Asurabhāga* (*Vali's* abode) about B.C. 1700.

(*a*) पादाः रश्मि-अंघ्रि तूर्य्यांशाः । इत्यमरः ।

In the Kāla-purusha Mandala we have two Nakshatras *Mriga-sirā* and *Ārdrā*. The old Nakshatra *Bāhu* was also situated in this constellation.

THE OLD NAKSHATRA BĀHU

(प्राचीन बाहु नक्षत्र)

Lit. The two arms	Presiding deity: *Rudra Mridha.*
Euph. *Kakkab Lugal* (The asterism of the mighty man)	*Ilu Meruduku* (The God Merodukh)

The Nakshatra consisted of the stars 2 and 4 *Mrigasya* (α, γ Orionis) forming the two shoulder-joints of *Rudra*—Orion. Vide:

रुद्रस्य बाहु । T. Br. I. 5.1.

If *Bāhu* be taken as the third asterism of the Lunar Zodiac instead of *Mriga-sirsha*, then the asterism *Ilvalā* must consist of the stars 7, 5, 14, 3, 9 *Mithunasya* (η, μ, υ, γ, κ Geminorum).

The modern *Ārdrā* has been formed by detaching the star 4 *Mrigasya* from the asterism *Bāhu*. The asterism (Lugal), says Brown, will be α Orionis alone or with some other portion of Orion.

THE NAKSHATRA MRIGASIRĀ

(मृगशिरा नक्षत्र)

Literally, The head of the Deer (*Prajāpati*)
Patron divinity: *Soma* (सोम), The Moon
Black. Yv.: *Mriga-sirsha* (मृगशीर्ष)

Euph. *Kakkab Mas-tab-ba-tur-tur* (The asterism of the little twins)	*Ilu-Nin-sur* [The Goddess lady of rising (Venus)]

The Nakshatra forms the leg of a cat (*a*); and it consists of the stars 11, 16 and 17 *Mrigasya* (γ, ϕ and ϕ^1 Orionis). We call the star 11 *Mrigasya*, *Risya* (ऋश्य) ; 16 *Mrigasya*, *Rudra* (रुद्र) and 17 *Mrigasya*, *Trisirāh* (त्रिशिराः).

(*a*) Vide :

मूषिकाशन पदाकृतौ विधौ व्योम मध्यमिलिते त्रितारके ।

Kālidāsa.

The month *Mārga-sirsha* derives its name from the full moon near this Nakshatra.

In the Vedic age, it had only a single star. Vide:

सोमाय स्वाहा मृगशीर्षाय स्वाहा ।

T. Br. III. 1.5.

NAKSHATRA ĀRDRĀ

(आर्द्रा नक्षत्र)

Lit. The sweat-making one

Presiding divinity: *Rudra*, the roaring Tempest-god also called *Mridha* (मृढ़)

Euph. *Kakkab-Lugal* (The asterism of the mighty man)	*Ilu Maruduku* (The God Merodukh)

From the time when the solstitial colure moved backwards from the Nakshatra *Ārdrā Lubdhaka* (आर्द्रालुब्धक), the sweat-making star *Lubdhaka* (1 *Sunah* = α Canis Majoris), the star *Visākha* alone or with some other stars of Kālapurusha assumed the title of the Nakshatra *Ārdrā*.

The *Yoga-tārā* of *Ārdrā*, says the Siddhānta, is the most prominent star of the group. Vide:

यथा प्रत्यवशेषाणाम् स्थूला स्यात् योगतारका ॥

S. S. VIII. 19.

The Siddhānta puts the star at Lat. 9° S. and Long. II. 7°-20′ and Messrs. Colebrooke and others identify the star with α Orionis.

Modern Hindu astronomers would have the Nakshatra consist of a single star by way of analogy with the old *Ārdrā*. Vide:

पद्माकृति उज्ज्वल-एक-तारकामयम् ।

Kālidāsa.

Cf.

रुद्राय स्वाहा, आर्द्रायै स्वाहा ।

T. Br. III. 1. 3.

Of the minor stars in this constellation, the stars 8, and 18 *Mrigasya* in the Nebula M. 42, as well as the row of little stars arranged in the shape of a Capital Greek Omega (Ω) surrounding the constellation, deserve special notice.

(1) MAYURA-TUNDA

(मयूर तुण्ड)

Lit. The neck and head of the Peacock

Ar. *Saiph* (The sword) Eng. The Sword

Lat. *Ensis Orionis* (The sword of Orion)

The stellar Prince *Skanda* rides on the Peacock, whose neck is marked by a short row of stars below the three-knotted arrow, they being the stars 19, 20, 8, 18 and 21 *Mrigasya* headed by the star 13 *Mrigasya* (υ, d, ι, θ^1, c and σ Orionis). The tail of the Peacock is represented by the famous Omega (Ω)-shaped stars around the constellation *Kāla-purusha*, lying in the Galaxy and its offshoot, and probably forming "the bands of Orion" (Job XXXVII). (*a*).

(2). GUHĀ (गुहा)

Lit. The cave

The soft offshoot of the Heavenly Stream surrounding the western borders of the constellation Kāla-purusha, has again to act a very solid part. When the galaxy is looked upon as the Vedic God *Parvata* (पर्व्वत), the Holy Hill of Heaven, its offshoot then forms with it the famous *Guhā* (गुहा) or the cave of *Vala*, in which he imprisons the floods, and which *Indra* breaks open. Vide:

त्वम् वलस्य गोमतः अप अवः अद्रिवः विलम्ः।

Rv. I. 11. 5.

(*a*) Cf. The 'bands of Orion' in the famous passage 'Or loose the bands of Orion.'

Job. XXXVIII 31.

Vide also,

वीलु चित् आरुजत्नुभिः गुहा चित् इन्द्र वह्निभिः ।
अविन्दः उस्रियाः अनु ॥

Rv. I. 6. 5.

अपाम् विलम् अपिहितम् यत् आसीत् वृत्रम्
जघन्वान् अप तत्ववार ॥

Rv. I. 32. 11.

Note : Later on, *Vala* had to act the part of *Vali* (वलि), who was imprisoned in this cavern. Vide:

यदा अतिष्ठः समुद्रस्य पूर्व्वकूले विले लिहन् ।

Mahā. XIV. 223. 17.

After this *Guhā*, *Skanda* is called *Guha*.

The famous *Guhā* also represents *Kanyā-pura*, the capital of King Vāna, where he imprisoned Aniruddha (अनिरुद्ध), the Sun-God (S.S. XII. 14), who had been carried off to his love-sick daughter Ushā (उषा), the Morning, by her friend Chitralekhā (चित्रलेखा) the planet Venus.

The imprisonment of *Anriuddha* led to the war between the King and *Sri-Krishna* grandfather of *Aniruddha*. See Supra. p. 112. Vide :

V. P. v. 30; Harivamsa 175-184.

Cf. Orion was carried off by Eos (Aurora), who had fallen in love with him. But as this was displeasing to the Gods, Artemis killed him with an arrow (W. Smith).

(3). PANIS (पणि)

The little stars forming the 'bands of Orion', may also well represent the Panis (पणि), the agents of *Vritra*, guarding the clouds imprisoned in the cave. Vide :

अयम् निधिः सरमे अद्रिबुध्नः... ... ...।
रक्षन्ति तम् पणयः ये सुगोपाः... ... ...॥

Rv. X. 108. 7.

3. SASA MANDALA [31]

(शश मण्डल)

Lit. The Hare

Mahā. *Kapoti* (Lit. The She-dove)	Gr. *Logos* (Hare) Lat. *Lepus* (Hare) Eng. The Hare

To the west of Mriga-vyādha are situated two small constellations *Kapoti* and *Kapota* (कपोत).

In the Western charts, the Constellation *Kapota* is named Lepus (the Hare), and *Kapoti*, Columba (the Dove).

The stars 6, 5, 1, 2, 3, 9, 8 and 7 of *Sasa* ($=\eta, \zeta, \alpha, \beta, \epsilon$, and another, δ and γ Lepi) form the she-dove. The stellar configuration in the Mandala is exactly the same as in *Kapota*. *Kapota* consists (chiefly) of eight stars situated in a manner similar to those of *Kapoti*.

The stellar Dove is hymned in Rv. X. 155. and Av. VI. 26-29.

The Mahābhārata evidently in explanation of the Vedic hymns, relates the story of the translation of the hunter with the Dove and its mate, to heaven. The story runs thus:

A *Vyādha* (व्याध) or a fowler bagged a she-dove and put it in a cage and went on in pursuit of his game, but could get nothing more. Night overtook him and he took shelter under a tree, shivering with cold and hunger. Out of hospitable feelings, the she-dove asked her consort sitting in their nest on the tree, to make fire for their guest. The fowler warmed himself and wanted some food. As nothing else was available, the she-dove asked her consort to burn himself in the fire, who did so, and the she-dove followed her lord, not liking to survive him. The *Vyādha* followed them repenting his past life. All the three were rewarded with a place in heaven. The *Vyādha* shines like *Indra* among the stars, and the Doves shine in heaven.

We give above only the substance of chapters 146-49 of Bk. XIII of the Mahābhārata, and to those chapters we would

refer the reader, merely quoting the following passages from them.

ततः कृतप्रतिज्ञः वै सः पक्षी प्रहसन् इव।
तम् अग्निं त्रिः परिक्रम्य प्रविवेश महामतिः। १४६
पतिव्रता संप्रदीप्तम् प्रविवेश हुताशनम्। २४८।६
ततः स्वर्गं गतः पक्षी विमानवरम् आश्रितः।
कर्म्मणा पूजितः तव रेमे सः सहभार्य्यया। २४८।१२
अभ्यधावत वर्द्धन्तम् पावकम् लुब्धकः तदा। १४९।११
ततः स्वर्गस्थम् आत्मानम् अपश्यत् विगतज्वरः। १४९।१२
यक्षगन्धर्व्वसिद्धानाम् मध्ये भ्राजन्तम् इन्द्रवत्।
एवं खलु कपोतः च कपोती च पतिव्रता।
लुब्धकेन सह स्वर्गं गता पुण्येन कर्म्मणा। १४९।१४
विराजते हि सा क्षिप्रम् कपोतीव दिवि स्थिता। १४९।१५

Mahā. XIII. 149.

There cannot exist any manner of doubt as to the identity of the *Vyādha* and the *Kapota*, with the constellations *Mriga-vyādha* (the Indian hunter, Canis Major) and *Kapota* (Columba or the Dove). And as the three live together in heaven, the *Kapoti* being by the side of the *Kapota* and looking at its mate, we can safely locate her in the small and pale constellation lying immediately to the north of the *Kapota* and contiguous to and west of the Indian Hunter, the configuration of its stars being extremely suggestive.

But probability is not proof. Whether this constellation is the exact locality, which was in the minds of the ancient *Aitihāsikas* (ऐतिहासिक) lit. story-tellers, we should not venture to assert positively. The Hare (Lepus) may lie hidden in the bulky mass of Indian Mythology. But till it turns up, *Kapoti* may be allowed to occupy the place.

4. KAPOTA MANDALA

(कपोत मण्डल)

Lit. The Dove

Lat. *Columba* or *Columba Noachi* (The Dove or Noah's Dove)

The stars 5, 6, 1, 3, 7, 8, 4, 2 *Kapotasya* (σ, μ, α, ϵ, another, and another, γ, β, Columbae) form the celestial *Kapota*, whose

translation to heaven is mentioned in the Mahābhārata, as referred to in the foregoing Mandala.

Royer, in the West, invented the constellation in A.D. 1679.

5. MRIGA-VYĀDHA MANDALA

(मृगव्याध मण्डल)

Lit. The Dear-hunter or the hunter

Vedic. *Svan* (श्वन्), the Dog
Euph. *Lik-udu* (= The dog of the Sun)
Gr. *Cyon* (*Kuon*) (= The Dog)
Sem. *Kalab-Samsi* (The Dog of the Sun)
Lat. *Canis Major* (The Great dog)
Eng. The Great Dog

The Mandala lies to the S.E. of *Mriga* (Orion). We read in A. Br. III. 33:

"The *Rishya* (ऋश्य), lit., 'the Deer' (into which *Prajāpati*, father of *Rudra* transformed himself) who, struck by the arrow, jumped up to heaven," says the A. Br., "is popularly called the constellation of *Mriga*; the well-known constellation of *Mriga-vyādha* is the Hunter (*a*), the familiar asterism of *Rohini* is the *Rohit* (She-Deer) and the famous *Ishu-Trikānda* is the three-knotted arrow of this story." Vide:

विद्ध ऊर्द्ध्वं उद प्रपततम् एतं मृग: इति आचक्षते।

य: उ एव मृगव्याध: स: उ एव स:। या रोहित् सा रोहिणी। य: एव इषु: त्रिकाण्डा। स: एव इषु: त्रिकाण्डा।

A. Br. III. 33.

(*a*) The great hunter repented and wept for having killed his father *Prajāpati* with an arrow, and was called *Rudra* (रुद्र), the weeper. Vide :

स: किल पितरं प्रजापतिम् इषुणा विध्यन्तम् अनुशोचन् अरुधत्। तत् रुद्रस्य रुद्रत्वम्।

Nir.. X. 1.5.

We have also seen that the constellation represents the dog of *Indra* (इन्द्र).

'Thou dog of *Indra* !' says the Rig-Veda, 'at *Indra's* singers barkest thou?'. Vide:

स्तोतॄन् इन्द्रस्य रायसि किम् ... ... ॥

Rv. VII. 55. 3.

We have further seen that the Constellation *Svan* was also called *Arjuna* (अर्जुन) *lit.*, the white one. Vide:

यत् अर्जुन ! सारमेय ! दतः पिशङ्ग यच्छसे ।

Rv. VII. 55. 2.

As *Indra* is a variant of the Sun, it is not at all surprising that the Mandala would be called *Kakkab Lik-udu* and *Kalab-Samsi* in the West.

Now, *Bhutavat-Pasumān* of the A. Br. (= *Bhutanāth Pasupati* of the Purānas) is the *Mriga-vyādha—Svan* of the Vedas. As both *Pasupati-Vyādha* and *Svan* occupy the same Mandala, by a very natural process *Pasupati-Vyādha* became, in course of time, the presiding deity of the dog *Svan*. It is for this reason that we find that *Bhairava* (भैरव), literally 'the vociferator,' a variant of the hunter (*Vyādha*), has a dog for his horse and is called *Svāsva* (श्वाश्व) *i.e.*, one who rides on a dog.

But a dog alone would not make a huntsman's equipment complete. To piece out the picture of a hunter, nature must provide *Pasupati-Kirāta* with a *sringa* (शृङ्ग) or a hunting horn, and it is satisfactory to find that the five principal stars of the constellation *viz.*, 1, 2, 3, 4 and 5 *Sunah* (α, ϵ, δ, β and η Canis Majoris) form a buffalo's horn or rather a hunting bugle. This is a rather singular circumstance.

We have said that both the Vedic *Visva-rupa* (Gr. Phæthon) and *Rudra* are called the Boar in the Vedas (vide, ante. p. 101). Now we find that the Boar is close to *Pasupati-Kirāta*, the Indian Hunter (*Mriga-vyādha*). The two heavenly bodies may bring back to the recollection of the readers of *Bhāravi* (A.D. 78), the whole plot of his famous poem the *Kirāta-Arjuniya*.

THE STAR LUBDHAKA

(लुब्धक तारा)

1 *Sunah* = α Canis Majoris

Rv. *Tishya* (तिष्य)
(The burning or the bright one)

- Zend. *Tistrya*
- Gr. *Seirios* (scorcher)
- Lat. *Sirius*
- Eg. *Sopdit*
- Bab. *Kak-ban* (the bow-star)

Rv. *Svan* (श्वन्)

- Euph. *Ka-lik-ka* (the tongue of the dog)
- Sem. *Lesan-kalbe* (the tongue of the dog)
- Lat. *Canis* and *Canicula*
- Eng. The Dog-star

Rv. *Kostā* (कोष्टा) ; lit. the Jackal
Pur. *Sivā* (शिवा) ; lit. the She-Jackal
Rām. *Visvāmitra* (विश्वामित्र)

The volume of *Lubdhaka* is supposed to be 500 times larger than that of the Solar orb. *Lubdhaka* is known to be about 26 times, and its faint companion about 9 times heavier than the Sun. It is 625,000 times more distant from the Earth than the Sun, and its actual velocity is 32 miles per hour.

In the Vedas the star is said to be of *Pisanga* (पिशङ्ग), reddish-yellow colour. Vide :

यत् अर्जुन ! सारमेय ! दतः पिशङ्ग यच्छसे ।

Rv. VII. 55.2.

But at present the star is one of the intensely white stars in the heavens. The redness of Sirius, says Seneca (B C. 67), is so strong as to exceed that of Mars (*Mañgala*) ; and Claudius Ptolemy (A.D. 150) says, it was the same colour as Cor. Scorpii (*Pārijāta*) (R. Brown II. 124). These statements of colour make the identity of *Lubdhaka* and Sirius complete in all respects.

The S. Siddhānta gives the Lat. and Long. of the star ; *viz.* Lat. 40°S and Long. II. 20°. Colebrooke identifies the star with Sirius.

We have shown (vide, ante p. 36) that *Lubdhaka,* the brightest star of heaven, is described as the tooth of the heavenly *Svan* both in India and in Greece. The star is the tongue of the great dog in Western Asia.

Lubdhaka is also called *Tishya* (तिष्य), the 'burning' or the 'bright one,' and is said to be an archer (*a*).

We invoke to our gathering place, says the Rig-Veda, the archers, *Krisānu* (*Brihaspati*), *Tishya* (*b*) and *Rudra* (रुद्र) strong amid all the *Rudras* (Prof. Griffith). Vide :

कृशानुम अस्तॄन् तिष्यम् सधस्थे आरुद्रम् रुद्रे षु रुद्रियम् हवामहे ॥

Rv. X. 64. 8.

The Star-king is called *Tistrya* and the first star in the Avesta.

(*a*) Vide: Rv. X. 64. 8 ; V. 54. 13.

Tishya, says *Sāyana,* is a star (तिष्यम् नक्षत्रम् च). *Tishya*, as an archer, may be connected with the Bab. *Kak-ban* (the bow-star). A glance at that part of heaven, shows that the *Ishu-Tri-Kānda,* the three-knotted arrow, must have been shot by the Vedic Hunter at the He-deer and the She-deer from the point, the star *Lubdhaka* occupies.

(*b*) The Nakshatra which is nearest to the Summer Solstice becomes *Ārdrā* (आर्द्रा), literally the sweat-making or the Sudorific one. And when the Sun is just on the point of the Ecliptic, Hindu holidays of *Ambu-vāchi* (अम्बुवाचि) lit. the rain-indicator, end. Hindus have to observe the *Ambu-vāchi* by fasting for three days. It is curious to find that *Brahmarsi Vasishtha's* famous fast for three days is connected with the Heavenly Dog. Vide:

वशिष्ठः तृषितः अन्नार्थी त्रिरात्र-अलब्धभोजनः ।

यत् अर्ज्जुन इति सप्तऋचम् ददर्श च जजाप च ॥ ६

Rv. VII. 55. 2. notes

On the authority of the lexicographer Halāyudha, Sir Raja R. Deva in his famous Sk. Lexicon puts *Ketu-Graha* as a synonym of *Ārdrā-Lubdhaka*- We leave the judicious reader to make his choice between *Ketu Graha*, the Descending Node, and the star *Lubdhaka*.

Vide :

We sacrifice unto *Tistrya*

* * * *

We sacrifice unto the first star

Tir. Yast. VI.

Tistrya, in the form of a horse, jumps into the sea of *Vourokasa* [=Sk. *Varuna-Kasa* (वरुण–कश) =the celestial water, the Milky Way], and waters overflow from the Heavenly sea.

On the Iranian side *Haptoiringa* (Sk. *Saptarshis*) is the leader of the stars in the north. *Vanant* (Sk. *Mulā*) is the leader of the stars in the South (Bund. II. 7). But *Tistrya* is the leader of the stars in general (Bund. II. 5). On the Indian side the star is also called *Visvāmitra* (विश्वामित्र). According to the Mahābhārata and the Rāmāyana, *Visvāmitra* (the star *Lubdhaka*) is the creator of the southern stars.

"Mad with anger,
He created a second set of the *Saptarshis* in the south and another host of stars there."

Vide :

सृजन् दक्षिण-मार्गस्थान् सप्तर्षीन् अपरान् पुनः ।
नक्षत्र-वंशम् अपरम् असृजत् क्रोधमुच्छितः ॥

Rām. I. 60. 21.

Vide also :

प्रतिश्रवणपूर्व्वाणि नक्षत्राणि चकार यः ।

Mahā. I. 11 34.

Cf. Of the Heavenly bodies, *Angra-Mainyu*, says the Avestā, created the planets and *Ahuramuzda* created the stars.

For further particulars, vide, Vithi VI *Trisamku Mandala*.

The star *Lubdhaka* is connected by play of words (*a*) with *Koshtā* (कोष्टा), the jackal. Alluding to the fact of *Lubdhaka* (Sirius) following up the Boar (Orion) in his rise on the Eastern horizon in the autumn and winter, the Rig-Veda declares in a pun :

(*a*) *Lubdhaka* means both the hunter and the jackal.

The fox steals up to the approaching lion, the jackal drives the wild boar from the brushwood. Prof. Griffith.

Vide :

लोपाशः सिंहम् प्रत्यञ्चम् अत्साः कोष्टा वराहम् निः अतक्त कक्षात् ॥

Rv. X. 28.4.

Svan-Siva (=the Constellation Canis Major) assumes the guise of *Sivā* (शिवा=the feminine form of *Siva* (शिव), the she-jackal, in the Purānas ; and as such she becomes the guide of *Vasu-Deva* carrying the new-born Sun-God *Srikrishna* in his arms to the vernal equinox near the *Krittikās* (*a*), to begin the new year. Compare :

'Ye (*i.e.*, *Visva-Devas*) raised the Sun to heaven by ever-lasting Law, and spread broad Earth, the mother, out on every side ;' Prof. Griffith.

Vide :

ये ऋतेन सूर्य्यम् आरोहयन् दिवि अप्रथयन् पृथिवीम् मातरम् वि ।

Rv. X. 62. 3.

THE OLD NAKSHATRA ĀRDRĀ-LUBDHAKA

(प्राचीन आर्द्रा-लुब्धक नक्षत्र)

Lit. The star Lubdhaka forming the Nakshatrs *Ārdrā*

Euph. *Kakkab Kak-Si-Sa* (The Star, the leader)	*Asar-rab-sami* (station great of the Heavens)

Before A.D. 1150 the star *Lubdhaka* seems to have formed the old Nakshatra *Ārdrā* (आर्द्रा), lit. 'the sweat-making one', of the Hindu Lunar Zodiac.

Because,—

(1) The star bears the double name *Ārdrā-Lubdhaka*. The commonsense view of the meaning of the double name is plain enough.

(2) As the Nakshatra *Ārdrā* is mentioned after *Ilvalā*, the 5th Nakshatra, the archaic *Ārdrā* must have followed *Ilvalā*, and no star other than *Lubdhaka* can fill the position better, and possibly answer the name *Ārdrā-Lubdhaka*.

(*a*) The vernal equinox was near the *Krittikās* (Pleiades) about 2225 B.C.

Vide :

इल्वला: सोमदैवत्या: रौद्रश्चार्द्रमुदाहृतम् ।

G. P. I.

(3) No other theory can account for the existence of the large gap of about 26° (in the Lunar Zodiac of the *Brāhmana* period which has come down to us), between the 6th asterism *Visākha-Ārdrā* and the 7th asterism *Punarvasu*, than what we suggest ; *viz.*, that the abandonment of the Nakshatra *Ilvalā* and the transfer of the title of *Ārdrā* from *Lubdhaka* to *Visākha*, were the real causes of the gap.

The scorching heat felt by the Vedic Rishis at the cosmical rising of the star is proverbial ; and in modern times it seems to have been connected with *Am'u-vāchi* (अम्बुवाचि), *lit.* 'the rain-indicating days'—three in number. The Dog's heliacal setting, cosmical rising, and heliacal rising gave to the Romans their *Dies Caniculares* or the Dog-days.

'About the identity of the asterism *Kak-si-sa*, a great deal of controversy has taken place in Europe. Prof. Sayce, M. Halevy and Geo. Bertin identify the star with Sirius. Dr. Oppert, at one time thought it was the Little Bear, while Jensen identifies it with Antares. Prof. Hommel regards it as Procyon.

Of course, such a title as the Leader naturally reminds us of Sirius, brightest and chief of the fixed stars.'

(R. Brown)

6. ARNAVAYĀNA MANDALA [363]

(अर्णवयान मण्डल)

Lit. The ship

Rv. *Nau* (नौ)
(The ship)

- Euph. *Maganda-anna* (the ship of the canal of heaven)
- Gr. *Argo* (the bright)
- Lat. *Argo-navis* (the bright ship)
- Eng. Argo

The Sun is the original *Nau* (नौ), the ship (*a*), always plying in the Upper Deep, and the *Mandala* is a reduplication

(*a*) मध्ये दिवः तरणिम् भ्राजमानम् ।

Av. XIII. 2. 36.

of it. This *Mandala* is the largest of all the constellations. The stars 9, 20, 12, 7 and 24 of *Nau* ($=\pi$, σ, γ, λ, ψ Argus) form the keel of the stellar ship ; the stars 8 and 11 *Nāvah* ($=\zeta$, θ Argus) represent the main-mast, and the star 16 *Nāvah* (ξ Argus), and others represent the sail. The star 1 *Nāvah* is either the rudder or the anchor of the ship and is called *Māna* (मान), literally, pole or weight. *Māna* (Canopus) is attached to the ship by a stellar chain.

The heavenly ship is spoken of twice in the Atharva Veda.

4. There moved through heaven a golden ship, a ship with cordage wrought of gold.

   There the Gods won the *Kushtha* plant, the blossom of eternal life.

5. They sailed in pathway paved with gold, the oars they plied were wrought of gold.

   All golden were the ship where-in they carried *Kushtha* down to Earth.

Prof. Griffith.

Vide :

हिरण्ययी नौः अचरत् हिरण्यवन्धना दिवि ।
तत्र अमृतस्य पुष्पं देवाः कुष्ठम् अवन्वत ॥ ४
हिरण्ययाः पन्थानः आसन् अरित्राणि हिरण्यया ।
नावो हिरण्ययीः आसन् याभिः निः आवहन् ॥ ५

Av. V. 4. 4-5.

Again

7. There moved through heaven a golden ship, a ship with cordage wrought of gold.

   There is *Amrita* incarnate, and thence was *Kushtha* born.

8. Where is the sinking of the ship and where is the summit of the Hill of Snow,

   There is *Amrita* incarnate and thence was *Kushtha* born.

Prof. Griffith.

Vide :

हिरण्ययी नौः अचरत् हिरण्यबन्धना दिवि ।
तत्र अमृतस्य चक्षणम् ततः कुष्ठः अजायत ॥
यत्र नावप्रभ्रंसनं यत्र हिमवतः शिरः ।
तत्र अमृतस्य चक्षणम् ततः कुष्ठः अजायत ॥

Av. XIX. 39-7-8.

'Proctor', say R. Brown, 'connected Argo with Noah's ark, and it is not improbable that it represented the huge ship of the Euphratean Deluge story'. But this ship cannot well represent Manu's ship of the Hindu Deluge story (*a*), towed by the primeval fish.

Manu's (मनु) ship was towed by the primeval Fish. The Great Fish in the Constellation Mina, still drags the ship-like Nebula M. 31, on which *Manu* (the Sun) with all the animals might be borne, from the dark southern Deep to beyond the point of the Vernal Equinox.

For further particulars, Vide *Mina Rāsi*.

This bright *Nau* (Argo Navis) stands in the midst of the Milky Way, and it seems to be referred to in the following passage of the Rig-Veda.

The King of Rivers (*Soma-pavamāna*, the Milky Way) wears a sheet of cloth and flows over the bright Ship of Heaven (Argo Navis=the bright ship). Vide :

राजा सिन्धूनाम् अवसिष्ट वासः ।
ऋतस्य नावम् आ अरुहत् रजिष्ठाम् ॥

Rv. IX. 89.2.

Note : *Sāyana* derives the word *Rajishthā* (रजिष्ठा) from the word *Riju* (ऋजु), *i.e.*, straight ; but we prefer to derive the word as used here, from the word *Rajah* (रजः), *i.e.* brightness. Cf. *Sravishthā* (श्रविष्ठा) from *Sravah* (श्रवः) and *Bhuyishthā* (भूयिष्ठा) from *Bhuyah* (भूयः), &c.

No constellation either in the North or in the South can produce a more brilliant record of supplying the polar circle with so many and so excellent Pole-stars, than *Nau* (Argo) *Mandala*.

(*a*) Vide Tait. Sam. VII. 1. 5. ; T. Br. I. 1. 35 ; Sat. Br. XIV. 1. 2 ; Av. XIX. 39.8.

The stars 22, 17, 6, 25, 5, 12, 20, 18 and 1 *Nāvah* (ω, υ, ι, κ, δ, γ, σ, ν and α Argus) with some others cover about a third of the Southern Polar circle. Of these, the stars 22, 17, 6, 5 and 18 *Nāvah* are excellent Pole-stars, while the rest are fairly near the celestial South Polar circle. The brightest star of this Polar circle is *Agastya*, which was near this Pole about B.C. 12,000.

This explains why our venerable bard of Vithoor with truly scientific instinct, makes his *Visvāmitra*, the Indian *Angra Mainyu*, propose to the discomfited Devas, the following term as a *sine-qua-non* of compromise.

'Let all the Nakshatras and my own Pole-stars, created by me remain for ever'. Vide :

नक्षत्राणि च सर्व्वाणि मामकानि ध्रुवानि अथ ।। २८ ।
यावत् लोकाः धरिष्यन्ति तिष्ठन्तु एतानि सर्व्वशः ।
मत्कृतानि ... ... ।। २९

Rām. I. 60.

THE STAR AGASTYA

(अगस्त्य तारा)

The star 1 *Nāvah* = α Argus

Rv. *Agastya* (अगस्त्य) (The presser of the Ocean)	Gr. *Merigeios* (The ground star) Ar. *Suhail* (The ground star) Lat. *Terrestris* (The ground star)
Rv. *Agastya* (अगस्त्य) (The presser of the Mount) *Māna* (मान) (The rudder or weight) *Mānya* (मान्य) (Polaris) *Māndārya* (मान्दार्य्य) (Polaris)	Gr. *Kanobos* (The rudder) Eg. *Kārbana* Lat. *Canopus*

The star *Agastya* is also called *Māna*, *Mānya*, and *Māndārya* (मान, मान्य, मान्दार्य्य). The *Suryya-Siddhānta* places the star at Lat.

80°S and Long. III 0°, and Colebrooke did identify it with the star Canopus. *Agastya* is the seventh in magnitude and the second in splendour of the starry host ; it being inferior only to *Lubdhaka*-Sirius in brilliancy. The star twinkles the most rapidly. It appears to flicker like a candle in the wind and flashes out in rapid succession. So the star does not look as a round body like other stars, but as a narrow radiant piece of silver ending off in two points. Hence the flower *Vaka* bears the name of Agastya.

About B.C. 12,000 *Agastya* was the South Pole-star. *Agastya*, as a Pole-star, is a variant of the Solar God *Vishnu*. Vide :

अगस्त्यः भगवान् विष्णः ।

A. P. 206. 1.

And as such, he is the husband of *Lopāmudrā* (लोपामुद्रा), *i.e.*, one who loses her phase, *i.e.*, the Moon (vide, Rv. I. 179).

The two Pole-stars, both the northern and the southern, says the S. Siddhānta, are situated directly over the two projected ends (=Poles) of Mount *Meru* which passes through the centre of the Earth, and forms its axis. Vide :

भूगोल-मध्यगः मेरुः उभयत्र विनिर्गतः ।

S.S. XII. 34.

मेरोः उभयतः मध्ये ध्रुवतारे नभःस्थिते ।

S.S. XII. 43.

The two Pole-stars may, therefore, be said to press down the two Poles of the Earth's axis.

As the star Canpous was the South Pole-star about B.C. 12,000, it was called *Agastya* (अगस्त्य) (*a*), a title appropriate enough for its place.

Kālidāsa alludes to the Polar throne of *Agastya* in—

अगस्त्यचिह्नाद् अयनात् समीपम्
दिक् उत्तरा भास्वति सन्निवृत्ते ।
आनन्दशीताम् इव बाष्पवृष्टिम्
हिमश्रुतिम् हैमवतीम् ससर्ज ।

Raghu. XVI. 44.

(*a*) *Aga* (अग) means a Mount, a tree or the sea ; and the root word *Sti* (स्ति) means 'to press down.'

From its relation to *Māna* (मान) the axis, the star was also called *Mānya* (मान्य), the child of *Māna* (*a*), and *Māndārya* (मान्दार्य), the child of *Māndāra* (*b*), both titles appropriate enough to its place then occupied. Vide :

एषः वः स्तोमः मरुतः इयम् गीः मान्दार्य्यस्य मान्यस्य कारोः ।

Rv. I. 165. 15.

For the same reason *Agastya* was figuratively called *Māna* (मान), the axis. Vide :

Rv. VII. 33.13.

We have it then that the word *Agastya* originally meant the Pole-star. There were always two *Agastyas* or Pole-stars (vide, p. 132). And we believe, the pair held, so to speak, the north and the south respectively. The earliest known north Pole-star *Abhijit* (अभिजित्) (Vega) seems to have been first called *Agastya* (the Pole-star) (B.C. 12,500).

'So the north was his original home.' Vide :

स्वम् आश्रमम् सौम्यम् उपाजगाम ।

B. P.

But when Canopus, the first Pole-star in the south, was found out (B.C 12,000), it also claimed its natural title *Agastya*. And the star received it. In the allegorical language of the Purānas, *Agastya* therefore had to go to the south. Vide:

इति एवं उक्त्वा भगवान् जगाम ।
दिशम् सः यामीम् सहसा अन्तरीक्षम् ।।

B P.

(*a*) The word *Māna* means a rod, a weight or measure, and probably in a secondary sense the axis. *Mānya*, therefore, means one measured by *Māna* (the axis). Vide :

मानेन सम्मितः यस्मात् तस्मात् मान्यः इति उच्यते ।

Br. Sam.

(*b*) *Mandara* (मन्दर) is a peak of Mt. *Meru* (the axis of the Earth). Mount *Mandara* is said to have been carried by the *Devas* and the *Asuras* to the Upper Ocean for the purpose of churning it ; in other words, to ascertain the two pole-stars and to fix the positions (by latitudes and longitudes) of heavenly bodies, the axis of the Earth was projected to the heavens by the astronomers of the North (*Deva-bhāga*) and of the South (*Asura-bhāga*).

Abhijit (Vega) (*a*), the earliest known Pole-star, consequently lost its original title and had to be called by another name. The new name was *Vasishtha* (वशिष्ठ) or 'one pre-eminently immovable or lustrous'.

It may therefore be rightly said that *Agastya* and *Vasishtha* were something like twin-brothers.

It is therefore declared in the Vedas :

'Born at the sacrifice, urged by adoration, both with a common flow bedewed the pitcher.

Then from the midst thereof, there rose up *Māna*, and thence, they say, was born the sage *Vasishtha*.'

Prof. Griffith.

Vide :

ततः ह मानः उत् इयाय मध्यात् ततः जातम् ऋषिम् आहुः वसिष्ठम् ।

Rv VII. 33. 13.

The reader is doubtless aware that the Pole-star is that prominent star which from time to time is nearest to the Pole of the Celestial Equator ; and that after a certain season it has to move on. So when *Agastya* had to lose the southern Polar throne, he returned to the north again to occupy the North Polar throne.

But it is difficult to say what was the star meant. The star 11 or 15 *Takshakasya* may well represent the throne in question.

Agastya is said to have drunk the whole *Samudra* (समुद्र), *i.e.* the celestial ocean. Vide :

समुद्रः शोषितः येन सः मे अगस्त्यः प्रसीदतु ।

N. P. (*b*)

This is merly the Paurānic way of telling a simple astronomical fact, namely, that on the heliacal rising of the star

(*a*) The star is no longer the Pole-star. It is now the chief star of the modern Nakshatra *Abhijit* (Lyra).

(*b*) Compare what an Egyptian poet says of *Karbana :*
'Which pours his light in a glaze of fire,
When he disperses the morning dews.'

Agastya, the rainy season ceases (*a*). The cult of *Agastya* takes place in Bengal for three days before the Sun enters *Kanyā Rāsi*, *i.e.*, for the last three days of the solar month of *Bhādra* (भाद्र), (August-September). Vide :

अप्राप्ते भास्करे कन्याम् शेषभूतैः त्रिभिः दिनैः ।
अर्घ्यम् दद्युः अगस्तयाय गौड़देशनिवासिनः ॥

G. P. 1. 119 1.

About the heliacal rising of *Agastya*, we cull the following from J. Bentley's Hindu Astronomy.

I Parāsara says :

'The star *Agastya* rises heliacally, when the Sun enters *Hastā* (हस्ता), and disappears when the Sun is in *Rohini*.

Note : The Sun enters *Hastā* about the 11th day of the Solar month of *Āsvina* (आश्विन) ; and the Sun is in *Rohini* about the 11th day of *Jaishtha*. For four months, therefore, *Agastya* remains invisible.

II. The B.V.P. and Bh. P. state that the heliacal rising of *Agastya* takes place when the Sun is 3° short of Virgo, *i.e.*, when the Sun's longitude is IV. 27°.

Note : The time indicated is about the 28th day of the solar month of *Bhādra* (भाद्र).

III. Varâha tells us that *Agastya* rose heliacally at *Ujjain*, when he would be in 23° of *Simha*.

Note : The time indicated is about the 23rd day of *Bhādra* (भाद्र).

At the time of Pandit Raghunandana, the heliacal rising of *Agastya* took place about the 17th day of *Bhādra* (भाद्र). Vide, Sir Raja R. Deva.

(*a*) *Agastya* is one of our season-stars. On its heliacal setting the rainy season comes in, and on its heliacal rising it ceases, or in other words, the Upper Deep gets dry. This fact gave rise to the popular belief about *Agastya's* drinking off the Upper Deep. Hence his other name *Samudra-Soshaka* (समुद्र–शोषक), *i.e.*, the Drinker of the ocean.

Cf. "We know the nature of thy mind,
Verily thou wilt give us naught." Prof. Griffith.

Vide :

विद्म हि ते यथा मनः अस्मभ्यम् इत् न दित्ससि ॥ Rv. I. 170-3

Agastya is one of those mythic personages who are found in the ancient traditions of many a nation. One of his peculiar functions was to keep the Ecliptic clear for the Sun to travel unmolested. Thus when the *Vindhya Parvatas* (विन्ध्यपर्व्वत), *i.e.*, the clouds of the mid-region (*a*) rose too high to allow the Sun to travel freely, *Agastya* (Canopus) put them down, his presence (heliacal rising in September) being sufficient for the purpose.

Cf. The peculiar office of the asterism Vanant (Nakshatra Mulā), says the Mino-Khired, is to keep the passes and gate of mount Alburz round which the Sun, the Moon and the stars revolve, and to prevent *Pairis* and *Daevas* from cutting off and breaking the road of the Sun. Vide, Mino-Khired XL. 9.12.

Note :—Zend. *Daivas* = Hindu *Asuras*.

KAPILA TĀRĀ

(कपिल तारा)

2. *Nāvah* = η Argus

The star 2 *Nāvah* is a star of the first magnitude and is a variable star. It varies in magnitude from 1·0 to 7.0 in a period of 67 years. In April 1838, the star was in the declining state of its light, but bright enough to be compared with *Rohit*. About March 1843 a new outburst took place, the star surpassed *Agastya* in brilliance and almost rivalled *Lubdhaka*. It is now on its way towards another maximum which may be expected in the course of the next ten years to come.

It is a star of *Kapila* (कपिल) or reddish yellow colour, subject to sudden outbursts of lustre. The star lies nearly at the southern end of the western branch of the heavenly *Gaṅgā* (the Milky Way), which is said to have been allowed to come down from heaven at the joint prayer of Prince *Bhagiratha* and *Maharshi Kapila*, to save from eternal perdition, the souls of the former's ancestors burnt to ashes by the fire that flashed all of a sudden from the latter's angry eyes.

Rām. 1. 41.

(*a*) *Parvata* (पर्व्वत) is one of the names of the Cloud. Vide, Nir. I.10.

Kapila is said to have attained a place in heaven and to shine there like a lamp-light, which burns only at intervals. Vide :

सम्भेद्य मण्डलम् पुण्यम् सवितुः शशिनः तथा ।
दीपज्योतिः स्वरूपेण परमात्मनि युक्तवान् ॥

P.P. V. 18.

The Sun is the original *Kapila*. Vide :

दशानाम् एकम् कपिलम् ... ।

Rv. X. 27. 16.

For he is of *Kapila* colour.

वसन्ते कपिलः सूर्य्यः ... । कौर्म्मे १८

And the Sun (*Vishnu*) was reduplicated in this star of the South. Vide :

ददृशुः कपिलम् तत्र वासुदेवम् सनातनम् ॥

Rām. 1. 40. 25.

For all these reasons, we find that 2 *Nāvah* (η Argus) =Kapila (*a*).

After *Kapila*, the western branch of the *Ākāsa-Gaṅgā* is called *Kapila-dhārā* (कपिलधारा) literally, 'the stream of *Kapila*'.

7. CHITRA-PATU MANDALA

(चित्रपट्ट मण्डल)

Lat. *Pictor*

This constellation was invented by La-Caille in A.D. 1752. We have translated the constellation name.

8. ABHRA MANDALA

(अभ्र मण्डल)

Lat. *Nebecula Major*

This constellation was invented by Royer in A.D. 1679. We have translated the constellation name.

9. CHATVĀLA MANDALA

(चत्वाल मण्डल)

Lat. *Mensa*

This constellation was invented by Flamesteed, the first Royal Astronomer of England, in A.D. 1725. We have translated the constellation name.

(*a*) The star *Kapila* is "*Māricha*" of the Atlas of Hindu Astronomy.

VITHI IV

The fourth *vithi* has six constellations :

1. Vana-mārjāra Mandala (वनमार्ज्जारमण्डल)
2. Karkata Mandala (कर्कटमण्डल) (13)
3. Suni Mandala (शुनीमण्डल) (2)
4. Eka-sringi Mandala (एकशृङ्गिमण्डल)
5. Krikalāsa Mandala (कृकलासमण्डल)
6. Patatri-mina Mandala (पतत्रिमीनमण्डल)

1. VANA-MĀRJĀRA MANDALA [46]

(वनमार्ज्जारमण्डल)

Lat. *Lynx*

This constellation was invented by Hevelius in 1690. A.D. We have translated the Western name of the constellation.

2. KARKATA RĀSI

(कर्कट राशि)

Karkata is the fourth division of the Solar Zodiac. It lies east of the Mithuna Rāsi and extends 30° in length. It comprises parts of the Mithuna Mandala, Karkata Mandala and Hrada-sarpa Mandala. And it consists of the last *pāda* (पाद) or quarter of the Nakshatra (space) *Punarvasu* and the whole of the Nakshatras *Pushyā* and *Asleshā*.

KARKATA MANDALA [62]

(कर्कट मण्डल)

Ak. *Nagar Asurra*	Gr. *Karkinos*
Ph. *Sertan*	Lat. *Cancer*
Sem. *Nam Garu*	Eng. The crab
Chin. (the Hare)	Hindu Astrology. *Kulira* (कुलीर)

Karkata is the smallest and the least conspicuous of all the Mandalas of the Zodiac.

Of the thirteen naked-eye stars of this Mandala, the stars 2, 3, and 4 *Karkatasya* (=α, δ, γ Cancri) form the asterism *Tishya* (तिष्य).

Besides these stars, there is the round-shaped Nebula M. 44. It is a very remarkable *Tārā-stavaka* (तारास्तवक) lit. star-cluster visible to the naked eye. We call it *Madhu-chakra* (मधुचक्र). This Nebula forms the trunk or body of the Crab, and the stars 3 and 4 *Karkatasya* (δ and γ Cancri) form its two forelegs. The stellar crab stands facing the East.

Of the unformed stars, the star 5 *Karkatasya* (= ζ Cancri) called *Kaikeyi* (कैकेयी), is a triple star and a wonderful binary system (*a*).

NAKSHATRA TISHYA

(तिष्य नक्षत्र)

Sk. *Pushya* (पुष्य) (*b*)

Euph. *Kakkab Gu-sir-kes-da*
(= Asterism of the yoke of the enclosure)

Ak. *Mastabba—Tur-tur* (The Little Twins)

Presiding deity : *Brihaspati* (बृहस्पति)
Jupiter, the Bow-star

The asterism consists of the stars 2, 3, and 4 of Karkata (= α, δ, and γ Cancri) and is in the shape of an arrow. The S. Siddhānta puts the *yogatārā* at Lat. 0° and Long. III. 16°, and at the middle of the arrow (*c*) ; Messrs. Colebrooke and others identify the star with the star 3 *Karkatasya* [= δ Cancri, called (Lat.) *Asellus Australis*, the Southern Ass]. In the Vedic age the asterism had only a single star. That star was very likely the star 3 *Karkatasya*, because the head-star must be supposed to have remained unchanged. Vide :

बृहस्पतये स्वाहा तिष्याय स्वाहा ।
T. Br. III. 1. 3.

The star 4 *Karkatasya* (= γ Cancri) called *Asellus Borealis*, the Northern Ass lies to the N. W. of the *Yogatārā* and it marks the point of the arrow. The star 2 *Karkatasya* (= α Cancri) lies to the S. E. of the *Yogatārā* and it marks the wing of the arrow.

(*a*) The asterism *Tishya*, surnamed *Pushyā* impersonates *Kaikeyi* in Vālmiki's Rāmāyana ; but we have transferred the name to 5 *Karkatasya*.

(*b*) The name *Pushyā* is connected with the annual festival of the *Pushya-ratha* (पुष्यरथ), lit. the ceremonial car, held at the time when the Moon is in the Nakshatra *Tishya* alias *Pushyā*.

(*c*) बार्हस्पत्यस्य मध्यमा। S. S. VIII. 18.

THE STAR LOPĀSA

(लोपाश तारा)

Lit. The Fox

Ak. *Lulla* (the Fox)

The Vedic name of 2 *Karkatasya* is *Lopāsa*, the Fox. Referring to its position in heaven in front of Simha, the Lion, the Veda states in a riddle :

"The fox steals up to the approaching Lion."

Prof. Griffith.

Vide :

लोपाशः सिंहम् प्रत्यञ्चम् अत्माः ... ... ॥

Rv. X. 28. 4.

THE TWIN STARS RĀSABHAU

(रासभौ) (*a*)

Lat. The Twin Asses

Rv. *Rāsabhau* (रासभौ) (the twin ass)
- Ak. *Mastabba Tur-rur* (The little twins)
- Gr. *Onoi* (The twin asses)
- Lat. *Aselli* (The twin asses)
- Eng. The twin asses

The stars 3 and 4 *Karkatasya* (δ and γ Cancri) are called in Latin *Asellus Australis* and *Asellus Borealis*, the southern and the northern asses. They lie very close to the stars 1 and 2 *Mithunasya* called *Asvinau* (Dioskouroi) (= β and α Geminorum), who had the *Rāsabhau* (रासभौ) for drawing their *Ratha* (रथ), chariot.

Astronomically, *Asvinau* = *Punarvasu* (= the stars 1 and 2 *Mithunasya* = the stars *Vishnu* and *Soma*); *Rāsabhau* = *Mastabba Tur-tur* = *Onoi* = *Aselli* = 3 and 4 *Karkatasya* (δ and γ Cancri) ; and *Ratha* (रथ), lit. the car *Madhu-chakra* - Praesepe ; the two

(*a*) In the Rig-Veda, *Rāsabha* (singular) is used. Vide :

युञ्जाथाम् रासभम् रथे .. ... ।

Rv. VIII. 74. 7.

But the Nirukta understands as *Rāsabhau* (रासभौ) (dual). Vide :

रासभौ अश्विवाहौ ।

Nir. N. I. 15. 4.

stars 3 and 4 *Karkatasya* drawing, dragging or pushing the car, being called *Pushya* (पुष्य), lit. the supports of *Pushya ratha* (पुष्य रथ), the ceremonial car.

MĀTRIKĀ MADHU-CHAKRA

(मातृका मधुचक्र)

Lit. the Bee-hive

Vedic. *Ratha* (रथ) (the Car)	Gr. *Phatne* (The Manger) Lat. *Praesepe* (The Bee-hive) Eng. the Bee-hive

To the east of the bow-shaped Nakshatra *Punarvasu,* and at a distance of about 12 feet from it lies the *Tārā-stavaka* (तारा-स्तवक), the star-cluster *Madhu-chakra.* It is in the shape of a full moon (*a*), with a nine-inch diameter. It is a collection of very small stars, so thickly crowded that their dim lights mingle together. Even the strongest eye-sight cannot single out any star out of them. It is therefore generally described as a mass of 'star dust'. It looks like a piece of cloud of reddish colour. This nebula lies S. E. of the star 1 *Mithunasya* (β Geminorum) and N. E. of the star 1 of Suni (α Canis minoris). It is to be noted that in Southern India Madhu-chakra is identified with the Nakshatra *Pushyā.*

The nebula is called *Phatne* in Greek, *Praesepe* in Latin and the Bee-hive in English.

The first telescope, turned upon the *Tārāstavaka,* revealed to Galileo its real nature and he counted 30 stars within its borders.

We know that when the sun enters the Nebula, we have the copious rains of *Srāvana* (श्रावण), or July-August. The *Ratha* (रथ) or car of the *Asvinau,* represented by *Madhu-chakra,* is said in the Vedas to be drawn by a couple of asses (*b*). The car is described

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(*a*) आ गोमता नासत्या रथेन अश्वावता पुरुश्चन्द्रेण यातम् ।
Rv. VII. 72. I.

(*b*) रासभौ अश्विवाहौ । इति निरुक्त ।

as "looking like a piece of autumnal cloud dropping honey as it moves." Vide :

प्र वाम् शरद्वान् वृषभः न निष्षाट् पूर्व्वीः इषः चरति मध्वः इष्णन् ।

Rv. I. 181. 6.

We have shown that the twins Castor and Pollux are the *Asvinau* of the Vedas, and that the stars 3 and 4 *Karkatasya* are their two asses ; and it follows as a matter of course that the nebula M. 44 giving the downpour in the month of *Srāvana*, is their Ratha (रथ) or car dropping nectar.

The nectar or honey is said to be supplied to the Bees by the *Asvins*, the masters of the celestial Bee-hive. Vide :

मधुप्रियम् भरथः यत् सरड्भ्यः ... ।।

Rv. I. 112. 21.

Thus in an astronomical aspect we get *Pusyha-ratha* (पुष्यरथ) the ceremonial car of the Asvins, complete in every respect.

The origin of the Hindu annual festival *Ratha-yātrā* (रथयात्रा), is evidently connected with the commencement of the tropical year called *Varsha* (वर्ष) (*a*) computed from the ascension of the Sun-God to the high temple of the Summer Solstice.

The equation, *Pushya-ratha* = the Crab, might have something to do with the Crab's being popularly called *Dasa-ratha* (दशरथ) in most parts of India (*b*).

When the Summer Solstice was in Karkata for 2250 years (from B. C. 1850 to A. D. 400), the Sun-God appearing in the Sign Crab or *Karkata* on the advent of a new tropical year, might fairly be called 'the son of the stellar Crab' (Dasaratha).

From the reddish colour of the Nebula M. 44 the stellar Crab, *i.e.* the fourth Sign or *Rāsi* is said to be of *Pātala* (पाटल) or reddish colour. Vide :

अरुण सित हरित पाटल पाण्ड विचित्राः ।

Jyotishatattva.

Note—*Mātrikā Madhu-chakra* or rather the Crab itself, may well represent *Mantharā* (मन्थरा) (*lit.* 'the slow-moving one') of *Vālmiki*.

(*a*) द्वे अयने वर्ष संज्ञितम् ।

V. P. II. 8. 65,

(*b*) *Cf.* The popular derivation of the word *Dasaratha* (दशरथ) the crab, is connected with its ten legs.

3. SUNI MANDALA [25]

(शुनी मण्डल)

Lat. *Canis Minor*

Eng. The Little Dog

In the Hipparcho-Ptolemy star-list the star Procyon (α Canis Minoris) was raised to the rank of a constellation, which had two stars assigned to it, *viz.*, α and β Canis Minoris. We have identified *Suni* with Canis Minor and *Saramā* with Procyon (vide Introduction, Ex. V.).

STAR SARAMĀ (सरमा)

Euph *Palura* or *Pallika* (= the crossing-of-the water-dog)
Ph. *Keleb Maim* (= the dog of the waters)
Gr. *Prokyon* (one who rises before the star *Kyon*)
Maira (= the sparkler)
Lat. *Mera* (the Dog of Icarius)
Procyon (one who rises before the star Cyon)
Eng. The Little Dog

It is a star of the first magnitude and of yellowish colour.

We have said that the star *Saramā* = Procyon (vide Introduction Ex. V) and the star *Pratyusha* = Gomeisa (β Canis Minoris).

As the two *Vasus*, the two stars represent the twins *Asvinau* as *Pratyusha* and *Pravāsha*, the Day and Night.

It is highly instructive to read the remarkable observation made by Prof. Max Müller about *Saramā* : "Saramā in the Veda is spoken of as a dog—a swift dog running along the sky—that was supposed to find out the cows that had been carried off by the *Panis* and hid in a cave. What is said of *Ushās* is said of *Saramā*."

THE OLD NAKSHATRA BĀHŪ

(प्राचीन वाहू नक्षत्र)

Lit. The Asterism, 'The Two Arms'

Presiding Deity : *Rudra* (रुद्र), The Tempest God

Euph. *Kakkab Pal-ur-a*

(The asterism 'the crossing-of-the-water-dog')

The two arms of *Rudra*, we have said (vide: p. 116), formed the old Nakshatra *Bāhū* (बाहू).

It would therefore seem that the stars 4 and 2 *Mrigasya* representing the two arm-pits of *Rudra,* constituted the Nakshatra *Bāhū* ; and that when the northern Solstice moved on to this division of the Lunar Zodiac, the Nakshatra was styled *Ārdrā*; and the star 4 Mrigasya had to be detached from the asterism. This hypothesis at first sight seems to clear up matters ; but unfortunately for this identification there are certain grave difficulties in its way.

In the list of Nakshatras, given in the T. Br., *Bāhū* is placed between the two Nakshatras *Invakās* and *Punarvasū.* Vide :

अग्नेः कृत्तिका। प्रजापतेः रोहिणी। सोमस्य इन्वकाः विततानि। रुद्रस्य बाहू। अदित्यै पुनर्व्वसू।

T. Br. I. 5. 1.

Now the question is which two stars form the asterism *Bāhū* (बाहू), lit. the two arms presided over by *Rudra.*

Our reply is a tentative one and we have to speak here subject to correction.

In the locality indicated, *i.e.,* between the Nakshatras (asterisms) *Invakā* and *Punarvasu,* we have only two stars *Lubdhaka* and *Saramā* suitable for the purpose of forming a lunar asterism, and no others. We have additional reasons to believe that Lubdhaka was surely one of the two stars, because the star still bears the name *Ārdrā-Lubdhaka* (आर्द्रा लुब्धक), *lit.* the rainy *Lubdhaka.*

Saramā also, we have shown, has all the characteristics of *Ārdrā* (vide, Introduction Ex. V).

We know that owing to the precession of the Equinoxes, the northern Solstice moved backward from *Saramā* to *Lubdhaka* between A. D. 25 and A. D. 1525.

As to their presiding deity, the rainy *Ārdrā-Lubdhaka,* and the 'Weeping' *Saramā*-Procyon could have no god better suited for them than the Weeping God *Rudra* (रुद्र) *lit.* the crying one. Vide :

कृत्तिकाः अग्निदैवत्याः रोहिणी ब्रह्मणः स्मृता।
इन्वकाः सोमदैवत्याः रौद्रम् आर्द्रम् उदाहृतम्।

A. P. I. 59. 2.

Vide also,

रुद्राय स्वाहा । आर्द्रायै स्वाहा ।

T. Br. III. 1. 5.

Note—It is pretty clear from the foregoing, that at one time *Lubdhaka* alone formed the Nakshatra *Ārdrā*. It is further to be noted that the abandonment of the Nakshatras (asterisms *Invakās* and *Vāhū* accounts for the unusually large gap between the modern Nakshatra *Visākha-Ārdrā* and the famous Nakshatra *Punarvasu*.

4. EKA-SRIMGI MANDALA [46]

(एकशृङ्गि मण्डल)

Lat. *Monoceros*

This constellation was invented by Hevelius in 1690 A.D. We have translated the constellation name.

5. KRIKALĀSA MANDALA [36]

(कृकलास मण्डल)

Lat. *Chamaeleon.* Eng. Chameleon

This constellation was invented by Bayer in 1604 A.D. It is a lizard-like reptile whose colour changes with its tempers. We have translated it into *Krikalāsa*.

6. PATATRI MINA MANDALA [28]

(पतत्रि मीन मण्डल)

Lat. *Piscis Volans* Eng. The flying fish

This constellation was invented by Bayer in 1604 A.D. We have translated the constellation name.

VITHI V

The fifth Vithi comprises the following constellations:

1. Simha-sāvaka Mandala (सिंहशावक मण्डल)
2. Simha Mandala (सिंह मण्डल) (35)
3. Hrada-sarpa Mandala (ह्रदसर्प मण्डल) (27)
4. Shashthāmsa Mandala (षष्ठांश मण्डल)
5. Vāyu-yantra Mandala (वायुयन्त्र मण्डल)

1. SIMHA-SĀVAKA MANDALA [32]

(सिंहशावक मण्डल)

Lat. *Leo Minor* Eng. Lesser Lion

This constellation was invented by Hevelius in 1690 A.D.

There are no important stars in this constellation. We have translated the constellation name.

2. SIMHA RĀSI

(सिंह राशि)

Presiding Divinity : *Suryya* (सूर्य्य) The Sun

Simha Rāsi is the fifth division of the Solar Zodiac. It lies to the east of Karkata Rāsi. Strictly speaking, this Rāsi comprises parts of Simha, Shashthāmsa and Kanyā Mandalas. The Rāsi consists of the Nakshatras (space) *Maghā, P. Phalguni* and the first *pāda* or quarter of the Nakshatra *U. Phalguni.*

SIMHA MANDALA [94]

(सिंह मण्डल)

Ak. *Urgula* (the Big dog)	Gr. *Leon*
Ph. *Layish*	Lat. *Leo*
Sem. *Aru*	Per. *Shir*
Euph. *Lik-gula*	Eng. the Lion
Heb. *Aryeh*	Hindu astrology : *Leya* (लेय) (*a*)

The Rig-Veda has a well-known reference to the Stellar Lion in a fine riddle.

(*a*) क्रियतावुरि जितुम कुलीर लेय यूक कौर्प्याख्याः ।

Varāhamihira.

"The fox steals up to the approaching lion."

Prof. Griffith.

Vide :

लोपाशः सिंहम् प्रत्यञ्चम् अत्साः ... ।

Rv. X. 28. 4.

Note :—The fox is the star 2 *Karkatasya*, which seems to run in front of the Lion. The star is Lulla (the Fox) of the Euphratean Star-list (*a*).

Leo is a very fine constellation. The brilliant stars of this constellation are mostly of *pāndu* (पाण्डु) *i. e.*, yellowish-white or bluish-white colour (*b*), and its presiding deity the autumn Sun is also of *pāndu* or yellowish-white colour (*c*).

The Sign is therefore said to be of *pāndu* colour. Vide :

अरुणसित हरित पाटल पाण्डु विचित्राः ।।

Jyotishatattva.

The constellation Leo has three Nakshatras (asterisms) in it; *viz.*, *Maghā* (मघा), *Purva-Phalguni* (पूर्व्व फल्गुनि), and *Uttara-Phalguni* (उत्तर फल्गुनि). But technically, the Rāsi Simha comprises only the first two of them, *U. Phalgui* falling in the Rāsi Kanyā.

The asterism *Maghā* forms the fore-part of the Lion, and *P. Phalguni* its middle part ; while the star 2 *Simhasya* (=β Leonis), the *Yogatārā* of *U. Phalguni*, lies in the tuft of its tail.

In its feminine character, the constellation is called *Simhikā* (सिंहिका), and as such she is the mother of *Rāhu* (राहु), who is called *Saimhikeya* (सैंहिकेय) lit. the child of the Lioness, after his mother. *Rāhu* is the legendary serpent which is supposed to cause the eclipse of the Sun and the Moon. *Rāhu* seems to be the constellation *Hrada-Sarpa* (ह्रदसर्प), Hydra which lies below the Lioness.

The stars 1, 2, 3, 4 and 6 *Simhasya* (α, β, γ δ and θ Leonis), the five conspicuous stars of the constellation, forming the body of the Lion which is of *Pāndu* colour, and of which the presiding deity is also of the same colour, very likely suggested the idea

(*a*) R. Brown. 1. 360.

(*b*) Vide : Sk. Lexicon by Sir Raja R. Deva.

(*c*) पाण्डुरः शरदि प्रभुः ।। Kurma Purāna XVIII.

of the five *Pāndavas* (पञ्चपाण्डव) of the legendary history of the Mahābhārata.

THE NAKSHATRA MAGHĀ

(मघा नक्षत्र)

Rv. *Aghāh* (अघा:)

Bab. *Kakkab-Gis-bar* (Wood of light) ; and

Kakkab. Gub-bara-mes-su-tu-e-kur (='Fire-flame ruler of the temple of the host of Earth')

Ar. *Al-Guba* Eng. The Sickle

The Nakshatra consists of the stars 1, 3, 5, 8, and 12 Simhasya (=$\alpha, \gamma, \eta, \epsilon, \delta$, Leonis) which form the figure of a plough (*a*), the ploughshare being just on the Ecliptic. The Star 1 *Simhasya* which represents the ploughshare, is the *Yogatārā* of the asterism *Maghā*. The S. Siddhānta puts the *Yogatārā* at Lat. 0° and Long IV. 9° ; and Messrs. Colebrooke and others identify it with the star 1 *Simhasya* (= α Leonis, the star Regulus). In the Vedic age the Nakshatra was called Aghāh (अघा:), and consisted of more than two stars (*b*). Vide :

अघासु हन्यन्ते गावः अर्जुन्योः परिउह्यते ।

Rv. X. 85. 13.

Now, अघासु = मघासु = मघा नक्षत्रेषु । Sāyana.

Therefore, *Aghāsu*=in the Nakshatra Maghā of many stars.

The presiding deities of the Nakshatra are *Pitarah* (पितर:) *i.e.*, 'the Fathers,' otherwise, the well-known *Saptarshis* (सप्तर्षि) or

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(*a*) लाङ्गलाकृतिनि पञ्चतारके । Kālidāsa.

(*b*) The reader will observe that, in the Vedas, no express mention is found about the number of stars included in any one of the Nakshatras. But we can have an idea of the number of stars in a particular Nakshatra, from the forms, singular, dual or plural, as the case may be, in which its name is used by the Vedic Rishis. We have seen that the singular forms, *Rohini* (रोहिणी) and *Tishyah* (तिष्य:), the dual forms *Asva-yujau* (अश्वयुजौ), *Vāhu* (वाहू) and *Punarvasu* (पुनर्व्वसू), and the plural forms *Krittikā* (कृत्तिका:), *Invakāh* (इन्वका:), *Asleshāh* (अश्लेषा:), and *Maghāh* (मघा:) occur in chapter 5, Book I of the T. Br. These forms clearly indicate the number of stars in each of the Nakshatras concerned.

'the seven sages' in the constellation Saptarshi. (*a*) These *Pitris* have, in their turn, *Yamarāja* (यमराज), the heavenly Judge for their chief (*b*).

The Nakshatra *Maghā* is therefore closely connected with *Yamo*, the Divine king of the pious dead and the patron divinity of the North Pole-star (α Draconis in B.C. 3000). And this connection led to its *yogatārā* being called *Yama-rāja-putra* (यमराजपुत्र) *i.e.* the son of *Yama-rāja* (*c*).

Cf. The presiding deities of the Euphratean *Kakkab Gub-bara* (*a Leonis*) are *Ilu sin* and *Ilu Nergal* [= The God, the Moon, and the God, the Great Hero (Death-God)] (*d*).

The name of the month of *Māgha* (माघ) is derived from the full moon at or near this Nakshatra *Maghā*. At the advent of the *Kaliyuga* (*e*) (कलियुग), on the day of the full moon at *Maghā* (मघा), there was the famous concourse of three lunar days (*Tithis*), three Nakshatras and three planetary fights in one day, known as the '*Kurukshetra yoga*' (कुरुक्षेत्र योग) (*f*), lit. 'the concourse in the High Field'.

(*a*) Vide :

ते मरीचि-आदयः सप्तस्वर्गे ते पितरः स्मृताः ।

वराहपुराणम् ।

(*b*) पितॄन् यमश्रेष्ठान् ब्रूमः ... ... । Av. XI. 6. 11.

धर्म्मराजः पितृपतिः ... ... ।

... ... शमनः यमराट् यमः ।

Amar-Simha.

(*c*) Astronomically, the connection between the Pole-star 7 *Takshakasya* (α. Draconis) and the star 1 *Simhasya*, is a very simple one ; because the Pole-star occupied the highest point of the line called *Rishi-rekhā* and the star a point below it.

(*d*) R. Brown II. 73 and 81.

(*e*) माघे च पौर्णमास्याम् वै घोरम् कलियुगम् स्मृतम् । Br. P.

(*f*) कुरुक्षेत्र योगः=एकस्मिन् सावनदिने तिथित्रय-नक्षत्रत्रय-योगत्रयाणाम् च स्पर्शः । इति स्मृति । Vide : Sir. Raja. R. Deva.

The root word *Magha*, means to adorn, or to play with dice. *Magha* is also one of the names of the *Kunda* (कुन्द) flower. We are at present unable to explain with certainty the derivation of the name of this Nakshatra.

From *Maghā*, the Planet *Sukra* (शुक्र) Venus (male), the son of *Bhrigu*, received one of its names *Maghābhu* (मघाभू), lit. the child of *Maghā*, while *Sri* (श्री), *i.e.*, Venus (female) is said to be born of *Bhrigu* (भृगु) and his consort *Khyāti* (ख्याति). Vide:

देवी धाता विधातारौ भृगोः ख्यातिः असूयत ।
श्रियम् च देवदेवस्य पत्नी नारायणस्य या ।

V. P. I. 8. 16.

The androgynous character of *Sukra* (Venus), fully appears in one of its names *Lakshmi-Sahaja* (लक्ष्मी-सहज) *i.e.*, 'one born along with *Lakshmi*' alias *Sri*. As the morning star it is *Sukra*, (Lucifer=Satan) (*a*) the leader of the *Asura* party, and as the evening star it is *Sri* or *Rati*, the Goddess of Love. In the ruins of Kanaraka in Orissa, there is a statue of the planet in the female form.

Cf. In the cuneiform inscriptions of Western Asia, Istar-Venus is described as a 'female at Sun-set' and a 'male at Sun-rise'. R. Brown II. 159.

On the authority of the astronomical *Rishi Garga*, *Varāha* the well-known Indian Astronomer states that the *Munis* (मुनि),

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(*a*) The planet *Sukra* (शुक्र) Venus, was known to the Vedic Rishis as *Usanā* (उसना). The name *Sukra* is not found in the Rig-Veda. We read (Rv. I. 121. 12. ; VI. 20. 11) that *Usanā* is the especial friend and favourite of *Indra*. *Indra* even goes so far as to identify himself with him (Rv. IV. 26. 1). He is never connected by the Vedic Rishis with the Asura-party. It is only the Paurānic poets who place him at their head.

Cf. 'How art thou fallen from Heaven, Lucifer, son of the morning ?' Isaish XIV. 12.

Note : "Gregory the great", says Kitto, "understands this passage of Isaiah in reference to the fall of Satan, in consequence of which the name (Lucifer) has been applied to Satan."

i.e., *Rishi-rekhā* (ऋषिरेखा) the solstitial colure, passed through *Maghā*, when king *Yudhishthira* reigned (*a*). This would place his reign in B.C. 2525.

The Babylonian name for the Nakshatra is very suggestive, as it seems to put the asterism at the top of Ziqqurat (the Tower of Babel = Fire-Alter Rauhina).

STAR YAMA-RĀJA-PUTRA

(यमराजपुत्र तारा)

Ph. *Melekh* (The king)
Sem. *Sar-ru* (The king)
Ak. *Lugal* (The king)

Gr. *Basiliskos* (The little king)
Lat. *Rex* or *Regulus* (The little king)
Cor Leonis (The Lion's Heart)
Eng. Regulus

Rishi-rekhā, the solstitial colure, which proceeds from the Pole-star for the time being, once passed through the star 1 Simhasya (α Leonis) which lies on the Ecliptic. At the time, the star occupied, as a matter of course, the highest point of the Ecliptic and was naturally regarded as 'King of the stars'. The close connection which then subsisted between the star lying on the solstitial colure and the Polar star *Yama* lying at the root of the line, gave rise to a right royal pedigree, and the star received the title *Yama-rāja-putra* (यमराज-पुत्र), lit. son of *Yama-rāja* presiding over the North Pole-star, the star 7 *Takshakasya* (α Draconis).

As *Dharma* (धर्म्म) lit. the immutable Divine Law of the universe, is impersonated in *Yama* (यम), the primitive Sun of the Hindu theogony, *Yama-rāja* is called *Dharma-rāja*, and *Yama-rāja-putra*, alias *Dharma-rāja-putra*, the star 1. *Simhasya*, was

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(*a*) आसन् मघासु मुनयः शासति पृथ्वीम् युधिष्ठिरे नृपतौ ।
इति राजतरङ्गिणी ।

naturally called *Yudhishthira* (युधिष्ठिर = युधि + स्थिर), lit. 'one always steady in war' (*a*).

The *yogatārā* of *Maghā* (from *Magha*, to play with dice) could not but be addicted to dice-playing.

NAKSHATRA PURVA-PHALGUNI

(पूर्व्वफल्गुनि नक्षत्र)

Presiding deity : *Bhaga* (भग), the blind Solar God (*b*)
Rv. *Arjuni* (अर्ज्जुनि)
Ak. *Kakkab Ili-ku-a* (The asterism of Marudukh, the Oracle God)
Ar. *Al-Zubra*

The Nakshatra consists of the stars 4 and 6 *Simhasya* (δ and θ Leonis) situated in a line running from north to south (*c*).

The S. Siddhānta puts the *Yogatārā* of *P. Phalguni* at Lat. 12° N. and Long. IV.—24°, and Messrs. Colebrooke and Burgess identify the star with the star 4 *Simhasya* (= δ Leonis).

In the Vedic period also, the Nakshatra consisted of two stars. Vide : अर्य्यम्नः पूर्व्वे फल्गुनी । T. Br. I. 5. 1. 4.

In the Rig-Veda the Nakshatra is called *Arjuni* (अर्ज्जुनि), and it consists of two stars. Vide :

अघासु हन्यन्ते अर्जुन्योः परिउह्यते । Rv. X. 85. 13.

(*a*) The Mahābhārata relates the fall of the planets, Saturn (*Duryodhana*), the Sun (*Bhishma*), and Mars (*Karna*), before the immutable Law of the Universe, impersonated in the star *Dharma-rāja-putra*, in the famous planetary fight which ushered in the Iron age (*Kali-yuga*).

(*b*) But according to the T. Br. the deity is *Aryaman* (अर्यमन्) the patron divinity of twilight. Vide :

अर्य्यम्नः पूर्व्वे फल्गुनी ! T. Br. I. 1. 4. 2.

(*c*) दक्षिणोत्तर गते द्वितारके । Kālidāsa.

But the Nakshatras *Purva* and *Uttara Phalgunis*, as well as the two Bhadrās, are said in astrological works to be like a *Khatvā* (खट्वा) or bed-stead in shape. The correct reading is, we believe, *Khanta* (खण्ट), a post, and not *Khatvā*, as two stars can hardly make the figure of a bed-stead. As both the asterisms are called *Arjuni* (अर्जुनि), we have to draw them in the shape of two *Arjuna* trees (अर्जुन वृक्ष) *i.e.*, *Terminalia Arjuna*.

Arjunyoh Phalgunyoh In the *Nakshatra Arjuni* of two stars.

From this single passage, we can fairly presume that even in the pre-historic days, the system of Nakshatras of the Hindu Lunar Zodiac was brought to a perfection. We should not pass over the interpretation which Sāyana puts on this valuable passage, highly important from an astronomical point of view. According to him अघासु = मघासु = मघानक्षत्रेषु = In the *Maghā Nakshatra* of many stars, and अर्जुन्योः = फल्गुन्योः = तयोः नक्षत्रयोः = In the *Phalguni,* alias *Arjuni Nakshatra* of two stars.

We have two Nakshatras that bear the name *Phalguni,* and from a Grammatical point of view, therefore, one may say that the word *Arjunyoh* means "of the two *Arjunis*". But there is only one Nakshatra which is called *Maghā*. How can the name be used in the plural form, *Aghāsu* (अघासु), *i.e.* in the *Aghās,* unless it means 'in the *Nakshatra* Aghā of many stars'? If *Aghāsu* means 'in the *Nakshatra Maghā* of many stars,' surely the context would show that.

Arjunyoh = In the *Nakshatra Arjuni* of two stars.

Prof. Weber seems to have overlooked this important passage, when he says that 'the Taittiriya Samhitā and Satapatha Brāhmana do contain the first allusion to the system of Nakshatras or Lunar Mansions marking the daily stations, occupied by the Moon during his circuit round the heavens.'

—The Indian Nakshatras II. 278.

The word *Arjuna* primarily means white. In a secondary sense it means the white *Arjuna* or *Phalguna* tree (*a*). The Nakshatra was named *Arjuni,* either because of the white colour of its two stars, or because of its being erect like an *Arjuna* tree (Terminalia Arjuna). From the Nakshatra Purva Phalguni the planet *Brihaspati* (Jupiter) derived one of its

(*a*) It is really very curious to find that the Hero of the Mahābhārata bears the names *Arjuna* and *Phālguni* derived from both the names of this Nakshatra.

names *Purva Phalguni-bhava* (पूर्व्वफलगुनिभव) lit. the child of *Purva-Phalguni*. Grammatically *Phalguni-bhava* = *Phālguna*.

NAKSHATRA UTTARA-PHALGUNI

(उत्तरफल्गुनि नक्षत्र)

Presiding deity : *Aryaman*.* (अर्य्यमन्)

The Black. Yv. *Arjuni* (*a*)

Euph. *Kakkab-Lamas-su* (= The asterism of the flaming one)

Ar. *Al serpha* (The Lion's tail)

The Nakshatra consists of two stars, 2 *Simhasya* (β Leonis) and 12 *Kanyāyāh* (υ Virginis) situated in a line running from north to south (*b*). The S. Siddhānta gives the latitude and longitude of the *yogatārā, viz.*, 13° N. and V. 5° ; and Messrs. Colebrooke, Burgess, and Bentley identify the star with β Leonis.

The star 2 *Simhasya* is named in the Mahābhārata, *Uttara* (उत्तर) (the son of King *Virāta* (विराट), who is said to have a lion on his banner (*c*). Vide :

ध्वजम् च सैंहम् युयुजे रथे पुनः ।

Mahā. IV. 66. 13.

And the star 12 *Kanyāyāh* is named *Drupada* (द्रुपद).

The star 2 *Simhasya* is named Denebola (Sem. *Dzeneb-al-Asad* = Ar. *Zanab-al-asad*), or the tail of the Lion (*Simha-lāngula* सिंह लाङ्गुल) in the West.

From U. Phalguni, the month of *Phālguna* (फाल्गुन) derives its name.

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* *Bhaga* the Sun God. The Black Yv.

(*a*) The two *Arjunis* may well represent the *Yamalārjunau* (यमलार्ज्जुनौ) *i.e.*, the Twin Arjuna trees, which the Sun-God *Srikrishna* had to break off.

(*b*) Vide : दक्षिण-उत्तर-मिलित तारकाद्वयम् ।

Kālidāsa

(*c*) Cf. In the Babylonian scheme this asterism has the Lion for its patron divinity.

R Brown II. 82.

3. HRADA-SARPA MANDALA [118]

(ह्रद सर्प मण्डल)

Ak. *Tsir-gal* (= the Great snake)
Ph. *Nakhasch maim* (the snake of the water)
Gr. *Hydra* (= the water-snake) Lat. *Hydra*
Eng. The water-snake

The constellation stretches from the confines of Mithuna to those of Vrischika. In Greek mythology, Hydra is said to be a water-snake living in the marsh of Lerne. The Babylonian *Merodach*, the Sun-God, attacked the serpent and the Greek hero *Hirakles* (Lat. Hercules), also a Sun-God, well-nigh killed it with the help of his attendant Iolaus (*a*). The snake had originally seven heads. The heads grew rapidly from 7 to 9, and from 9 to 100 (Aratos and Virgil). In India *Srikrishna*, the Sun-God, found in the *Hrada* (ह्रद)., the deep pool of the *Yamunā*, *Kāliya* (कालिय) the dark snake with many heads. He trampled its head under his feet and was about to kill it, but took compassion at the intercession of his wife and granted it its life, on condition of its leaving the *Yamunā* waters. He ordered him to go to the Upper Deep, and not to fear *Garuda* (गरुड़), the snake-killer bird, who, he said, was sure not to molest one marked with *chakra* (चक्र) the disc, an emblem of his foot stamp, on its head. Vide :

ह्रदं कालियनागस्य दद्दृशे अतीव भीषणम् ॥ ३.
आरुह्य अभुग्नशिरसः प्रननर्त्त उरुविक्रमः । ४३
व्रणाः फपे अभवन् तस्य कृष्णस्य अङ्घ्रि निकुट्टनैः ।
यत्र उन्नतिम् च कुरुते ननाम अस्य ततः शिर ॥ ४४
* * * *
नात्र स्थेयं त्वया सर्प ! कदाचित् यमुना जले ।
सभृत्यपरिवारः त्वम् समुद्रसलिलम् व्रज । ७४
मत् पदानि चं ते सर्प ! दृष्ट्वा मूर्द्धनि सागरे ।
गरुड़ः पन्नगरिपुः त्वयि न प्रहरिष्यति ॥ ७५

V. P. V. 7.

The constellation has now its upper portion in the *Deva-bhāga*, and the lower portion in the *Asura-bhāga*.

(*a*) Vide, R. Brown I. 104 and W. Smith's Class Dictionary.

In the disguise of a *Deva*, the serpent *Rāhu* drank *Soma* in the company of the *Devas*. The head of the serpent was severed from his body by *Vishnu* (विष्णु), the Sun-God, with his *chakra* (चक्र), the solar disc. The head went heavenward and is called *Rāhu* (राहु), and the tail which fell down earthward is called *Ketu* (केतु). *Ketu* gave birth to comets and fiery meteors. Vide : Bh. P. VIII. 9. 24-26.

Astrologically, the great snake *Rāhu* (राहु) presides over the two *chāndra-pātas* (चान्द्रपात) (*a*) the Nodes of the Lunar orbit, ascending and descending. Vide :

दक्षिणोत्तरत: अपि एवम् पात: राहु: स्वरंहसा ।

निक्षिपति एष: विक्षेपम् चन्द्रादीनाम् अपक्रमात् ॥

S. S. II. 6.

पातस्थानाधिष्ठात्री देवता राहु: जीवविशेषः । चन्द्रपात: तु दैत्यविशेष: राहुः । इति रङ्गनाथः ।

The water-serpent is said to be a child of the Lioness (Sk. सिंहिका), and after its mother, *Rāhu* is called *Saimhikeya* (सैंहिकेय).

During the solar eclipses, the Sun was supposed by the Hindus of the prehistoric period to be darkened by *Svar-bhānu* (स्वर्भानु), lit. the celestial Sun (vide : Rv. V. 40. 5 ; S. Br. V. 3. 22 and IV. 3. 4. 23).

यत् त्वा सूर्य्य स्वर्भानु: तमसा अविध्यत् आसुर: ।

अक्षेत्रवित् यथामुग्ध: भुवनानि अदीधयु: ।

Rv. V. 40. 5.

The darkness, which eclipsed the Sun was naturally thought to be an unseen monster *Ahi* (अहि), the serpent, called *Rāhu* (राहु), literally 'the hidden one' (=solitary) (*b*). Vide, Av. XIX. 9. 10. And *Rāhu* was reduplicated in the stellar water-snake.

(*a*) The two Lunar Nodes are the two points where the Ecliptic cuts the Lunar orbit. And as the two points are not stationary but moving, their presiding deity *Rāhu* is called a *Graha* or a planet. Sk. *Ketu* = the tail, and Lat. *Nodus* = the tail.

(*b*) The word *Rāhu* is connected with the root *Rahah* (रह: =solitude). Cf. The star Alphard (= the solitary) = the star 1 of Hrada-Sarpa.

Hence in Astrological phraseology, *Svarbhānu* = *Rāhu* = Darkness. Vide :

तमः तु राहुः स्वर्भानुः । इति अमरः ।

About 2900 years ago, the highest point of the Ecliptic, otherwise called the summer solstice, lay over Hydra's head ; and as in his southing, the Sun-God begins to fade, or to speak astrologically, to sleep after having reached this point, people naturally attributed the loss of the solar fire to the Sun's contact with *Hrada-Sarpa*. This *Hrada-Sarpa*, called *Kāliya* (कालिय), 'the Dark one', in the Purānas, became associated with *Rāhu*, the eclipse-maker Dragon.

Thus was *Rāhu* redupliacted in the *Hrada-Sarpa*, and this was the origin of the fight between the Sun-God and the stellar snake (Hydra) *Hrada-Sarpa*. Accordingly we have called the star 1 *Hrada-Sarpasya* (α Hydrae) *Kāliya* (कालिय) lit. Darkness.

The *Hrada-Sarpa* with its coadjutors *Karkata* and *Vrischika*, is collectively called *Vāsuki* (वासुकि), who covers more than five consecutive *Rāsis*, namely from Karkata (Cancer) to Dhanuh Rāsi (the Sign Archer), on which the Sun-God takes his rest during his southing. The Sun-God is therefore astrologically said to sleep for over five months on the back of the snake *Vāsuki* (वासुकि), otherwise called *Ananta* (अनन्त) lit. the endless snake, and *Sesha* (शेष) (*a*), lit. the last thing in the lower Abyss. This fact made the serpent *Vāsuki*, a creature, a *Mitra* (मित्र) lit. a friend, nay a brother of the Sun (*b*). We have accordingly called the star 2 *Hrada-Sarpasya* (ζ Hydrae), *Vāsuki* (वासुकि); and the star 9 *Hrada-Sarpasya* (β Hydrae), *Sesha* (शेष).

(*a*) It is interesting to observe that the plough-shaped *Maghā* stands on the shoulder of the serpent *Ananta* whose incarnation, the plough-holder *Valarāma* was. Vide,

मैत्रेय श्रूयताम् कर्म्म यत् रामेन अभवत् कृतम् ।
अनन्तेन अप्रमेयेण शेषेण धरणीभृता ॥

V. P. V. 35 3

(*b*) The characteristic of both the Moon and *Hrada-sarpa* are combined in *Lakshmana* the incarnation of *Ananta*.

It should be observed here that owing to the retrograde motion of the Summer Solstice, the *Sayana* (शयन) of the Sun-God has receded backwards, and we now observe the *Sayana* in the middle of *Āshārha* (June-July) when the Sun travels through Mithuna (Gemini), instead of in the beginning of *Srāvana* (July-August) when the Sun travels through Karkata, the Crab.

A straight line dropped from 3 *Simhasya* through 1 *Simhasya*, leads straight to the star *Kāliya*.

In this Mandala, lies the Nakshatra *Asleshā* (अश्लेषा) and the important star *Kāliya* (कालिय).

THE NAKSHATRA ASLESHĀ

(अश्लेषा नक्षत्र)

Euph. *Kattsir-ninake* (= the mouth-of-the-snake-drinks)

Bab. *Kakkab Tur-us-mal-makh* (= the asterism, son of the supreme Temple)	*Ilu Danu* (The God, the Divine Judge) (*a*)

Lat. *Caput Hydrae* (The head of Hydra)

The separation of Rāhu's head from the body made the head *A-sleshā* (अ-श्लेषा), literally, one which has lost its connection with the body. And the cluster of five, or more properly, six stars forming the disc on the hood of Hydra, is called the Nakshatra *Asleshā* (अश्लेषा) ; while *Ketu* (केतु), the tail cut off, being a continuation of the Nakshatra *Asleshā* is called *Asleshā-bhava* (अश्लेशाभव), lit. the issue of *Asleshā*.

The asterism consists of the stars 2, 6, 10, 11, 13 *Hrada-Sarpasya* (= $\zeta, \epsilon, \eta, \delta, \sigma$ Hydrae). The stars form the figure of *chakra* (चक्र), the disc on the hood of a snake (*b*), generally confounded with a wheel. Kālidāsa (A. D. 1242) would assign seven stars to the asterism, that is to say, he would add the stars 5 and 1 to the group and make the asterism resemble a dog's tail in shape. Vide :

मौलिगे भुजगभे श्वपुच्छके भङ्गुराकृतिनि सप्ततारके ।

Kālidāsa

(*a*) Vide, *Maghā*.

(*b*) चक्राकृतिनि पञ्चतारके । Jyotisha.

Compare. Gk. *Kynosoura* (= 'dog's tail') = The little Bear.

The easternmost star of the cluster, representing the disc of Hydra's hood, is the *Yogatārā* of the *Nakshatra Asleshā* (a). The star 2 *Hrada-Sarpasya* (ζ Hydrae) is the easternmost star of the group and is therefore the *Yogatārā*. The S. Siddhānta puts the *Yogatārā* at Lat. 7° S. and Long III. 19° ; and Mr. Burgess identifies it with the star 6 *Hrada-Sarpasya* (ε Hydrae). Astrologically, *Lakshmana* was born under the Nakshatra *Asleshā*. We have accordingly named the star 6 *Hrada-Sarpasya* (ε Hydrae), *Sumitrā* (सुमित्रा).

THE STAR KĀLIYA

(कालियतारा)

Euph. *Alla* (the snake)
Ak. *Tur*
Chi. *Tah*
Sem. *Al-Ferd* (= the solitary)
Eng. Alphard

It is a red-coloured star of the second magnitude and looks very fine.

4. SHASHTHAMSA MANDALA [30]

(षष्ठांश मण्डल)

Lat. *Sextans*

This constellation was invented by Hevelius in A.D. 1690 and we have translated the constellation's name.

5. VĀYU-YANTRA MANDALA [28]

(वायुयन्त्र मण्डल)

Lat. *Antlia Pneumatica*

This constellation was invented by La Caille in A.D. 1752, and we have translated the name.

(a) Vide :

रोहिणी आदित्य-मूलानाम् प्राची सर्पस्य वै वहिः ।

S. S. VIII. 19.

VITHI VI

This *Vithi* comprises the following constellations.

1. Saptarshi (सप्तर्षि) (35)
2. Sārameya-Yugala (सारमेययुगल)
3. Kari-munda (करिमुण्ड)
4. Kanyā (कन्या) (32)
5. Suparna (सुपर्ण) (7)
6. Kāmsya (कांस्य) (7)
7. Trisanku (त्रिशङ्कु)
8. Makshikā (मक्षिका)

1. SAPTARSHI MANDALA [122]

(सप्तर्षिमण्डल)

Lit. 'The constellation of the seven sages'

Rv. *Pitarah* (पितरः)
(The fathers)

Zend. *Amesha Spentas*
As. *Bilu-zakki-mati.*
(= The lord of the ghost-world)

Rv. *Saptarshis* (सप्तर्षि)
(The seven sages)

Zend. *Haptoiring* (a) (The goers by seven)
Lat. *Septen-triones.*
(The seven ploughing Bulls)

Rv. *Sapta Mayuryyah*
(सप्त मयूर्य्यः)
The sevn Pea-hens)
Mahā. *Chitra-Sikhandi*
(चित्र शिखण्डी)
(The Pea-cock)

Rv. *Rikshah* (ऋक्षः)
(The Bear)
Rām. *Jāmbuvān*
(जाम्बुवान्)
(The Prince of the Bears)

Ph. *Dub-kabir*
(The Great Bear)
Gr. *Arctos Megale*
(The Great Bear)
Lat. *Ursa Major*
(The Great Bear)

(*a*) *Haptoiring* is the leader of the stars in the north (Bund II. 7), and is entrusted with the charge of the gate and passage of hell to keep back demons and demonesses, fairies and sorcerers (Minokhired 49. 15).

Rv. *Vrihat Ratha* (वृहत् रथ) (The Long chariot)	Ak. *Margidda* (The Long Chariot) Lat. *Plaustrum Major* (The Great Waggon) Chin. *Ti-cheh* (The chaiot of the supreme)
Paurānic. *Sakata* (शकट) (The cart)	Eng. Churl's (Charle's) Wain The Great Wain The Waggon The Plough The Butcher's cleaver
Paurānic. *Suruchi* (सुरुचि) (The beautiful)	Gr. *Kallisto* (The beautiful) Gr. *Helike* (The twister)

Of the stars of this Mandala :

The star 1 = *Angirā* (अङ्गिरा) ; Ar. *Alioth* (= the Jot)
,, ,, 2 = *Kratu* (क्रतु) ; Ar. *Dubhe* (= the Bear)
,, ,, 3 = *Marichi* (मरीचि) ; Ar. *Benetnasch* (= Procession of mourners) or *Alkaid*
,, ,, 4 = *Vasishtha* (वशिष्ठ) ; Ar. *Mizar* (= the Test)
,, ,, 5 = *Pulaha* (पुलह) ; Ar. *Mirak* (= the Loin)
,, ,, 6 = Pulastya (पुलस्त्य) ; Ar. *Phecda* (= the thigh)
,, ,, 11 = *Atri* (अत्रि) ; Ar. *Megrez* (the root of the tail)

The star 20 = *Arundhati* (अरुन्धती) (The evening)	Ar *Alcor* (= The bird) *Saidak* (the confident) Zend. *Ashi*

The seven solar rays, says the Rishi Yāska, are the *Sapta-Rishayah* (सप्तऋषयः). Vide :

सप्तऋषयः सप्त आदित्यरश्मयः इति वदन्ति नैरुक्ताः ।

Nir. I. 1. 5.

Each of them "had a local habitation and a name". And the seven shining stars of the northern sky represent them. They were deified and collectively called *Pitarah* (पितरः), the Fathers (*a*). The Brahma Siddhānta edited by Rishi Sakala,

(*a*) ये मरीचिः आदयः सप्त स्वर्गे ते पितरः स्मृताः ।
इति वाराहे पितृसर्गे ।

gives the positions occupied by each of the seven *Rishis* and *Arundhati*. We have accordingly designated the eight stars concerned, as described above.

They are the seven Gods (rays) born of *Aditi*. Vide :

देवाः आदित्याः ये सप्त । Rv. IX. 114. 3.

And *Aditi* placed them in heaven and cast away *Mārtanda* (मार्त्तण्ड), the Sun. Vide :

अष्टौ पुत्रासः अदितेः ये जाताः तन्वः परि ।

देवान् उप-प्र ऐत् सप्तभिः परा मार्त्ताण्डम् आस्यत् ।

Rv. X. 72. 8.

In the Avesta, the seven Rishis re-appear as the seven *Amesha spentas*, one of whom—*Ahura-Mazda* afterwards became the leader, and *Mithra* (*a*) (Sk. *Mitra* = Sk. *Mārtanda* = the Sun), the Light of Heaven, was associated with them as a chief god.

"As *Mazdaism* struggled on towards unity, *Ahura-mazda* became the supreme creator, and other six gods became his subjects and creatures.

But *Mithra Ahura*, invoked as an indivisible unity, reminds one that the creator was formerly a brother to his creatures" (Darmesteter).

They are the sages with thousand eyes, and born of fervour, and living in fervour, they protect the Sun. Vide :

सहस्रनीथाः कवयः ये गोपायन्ति सूर्य्यम् । (*b*)

ऋषीन् तपस्वतः यम तपः-जान् अपि गच्छतात् ॥

Rv. X. 154. 5.

"And in recognition of their patronage, the setting Sun lowers his flag at their rising and looks up to them with a reverential bow." Vide.

अधः प्रस्थापिताश्वेन समावर्ज्जितकेतुना ।

सहस्ररश्मिना साक्षात् सप्रणामम् उदीक्षिताः ॥

Kumār. VI. 7.

(*a*) Pers. *Miher* = the Sun.

(*b*) On this dictum of the Veda, *Vālmiki* made King *Jāmbuvān* (The Great Bear) the Prime Minister of *Rāma* the nocturnal Sun-God.

"Like a dark steed adorned with pearl, the Fathers decorated heaven with constellations ;

They set the light in day and in night the Darkness."

Prof. Griffith.

Vide ;

अभिश्यावम् न कृशनेभिः अश्वम् नक्षत्रेभिः पितरः
द्याम् अपिंशन्
रात्र्याम् तमः अदधुः ज्योतिः अहन् ... ... ॥

Rv. X. 68. 11.

They created the five elements. Vide :

सप्तर्षयः भूतकृताः ते ।

Av. VI. 108. 4.

They form one body. Vide :

यत्रा सप्तऋषीन् परः एकम् आहुः ।

Rv. X. 82. 2.

As a constellation they form a collective body. Vide :

मण्डले हि एतेषाम् अविभागः ।

Nir. X. 3. 2.

And the seven stars are known as the '*Chitra Sikhandi*'. Vide, Mahā. XII. 336.

एकत द्वित त्रिताः च उचुः चित्रशिखण्डिनः ।
वयम् हि ब्रह्मणः पुत्राः मानसाः परिकीर्त्तिताः ॥

They had one wife—*Arundhati* (अरुन्धती), 'the Evening'. Vide :

ऋषीणाम् अरुन्धती ।

Tait. Ar. III, 9 (*a*).

They are the seven bright sparks of fire. Vide :

त्रिः सप्त विष्णुलिङ्गकाः ।

Rv. I. 191. 12.

They are the seven Pea-hens (*Sk. Mayuri*). Vide:

त्रिः सप्त मयूर्यः ।

Rv. I. 191. 14.

(*a*) The Purānas give them seven wives (vide Introduction. p. 34).

They are the seven pea-cocks. Vide :

सप्तर्षय: मरीचि-अत्रि-मुखा: चित्रशिखण्डिन: ।

Amara.

In interpreting the famous passage about the *Rikshāh* (ऋक्षा:),

अमी ये ऋक्षा: निहितास: उच्चा......।

Rv. I. 24. 10.

the Niruktakārs understand *Rikshah* to mean the stars. Vide :

ऋक्षा: स्तृभि: इति नक्षत्राणाम् ।

Nir. N. III. 29.

But the *Bājasaneyinah* would understand *Rikshah* to mean the Bears.

तथा च वाजसनेयिन: आमनन्ति ऋक्षा:

इति ह स्म वै पुरा सप्त ऋषीन् आचक्षत ।

Vide, Sāyana's Commentary Rv. I. 24. 10.

The Sat. Br. accepts this view. Vide:

Sat. Br. II. 1. 1. 4.

The Mandala forms the *Brihat Ratha* (वृहत्रथ), *lit.* the Long Chariot of *Indra*. Vide :

यत्र रथस्य वृहत: निधानम्......।।

Rv. III. 53. 6.

On this car *Indra* and king *Nahusha* ride together. Vide :

अरट्वे अक्षे नहुषे सुकृत्वनि सुकृत् तराय सुक्रतु: ।।

Rv. VIII. 46. 27.

It is made of gold (stars). Vide :

रथ: हिरण्यय: ।। Rv. VIII. 33. 4.

And its yoke is uplifted. Vide :

एव इत् धू: वृष्ण: उत्तरा ।।

Rv. VIII. 33. 18.

And this simple astronomical dictum is adopted by the great poet Māgha, who thought that these seven stars resembled a cart. Vide :

स्फुटतर उपरिष्टात् अल्पमूर्त्तेः ध्रुवस्य ।
स्फुरति सुरमुनीनाम् मण्डलं न्यस्तम् एतत् ॥
शकटम् इव महीयः शैशवे शार्ङ्गपाणेः ।
चपल-चरणक-अब्ज-प्रेरण-उत्-तुङ्गित-अग्रम् ॥

Canto. XI. 3.

Cf. "Where yon gaunt Bear disports a tail."

Aratos.

Compare also, "the three stars (ϵ, ζ, and η)...........suggest just the curve of a plough-handle."

Maunder. p. 30.

Note : Astronomically, the yoke of the car = the tail of the Bear = the plough-handle.

Ziva (जीव) Zeus-Jupiter, as the child of the Peacock, is called *Chitra-Sikhandijah* (चित्रशिखण्डिजः). Vide :

जीवः आङ्गिरसः वाचस्पतिः चित्रशिखण्डिजः ।

Amara.

And *Srutarvān* (श्रुतर्वान्), *lit*., one versed in *Sruti* or the Vedas, *i.e.*, Jupiter, as the child of *Riksha* (ऋक्ष) the Bear, is called *Ārksha* (आर्क्षः). Vide :

आ अगन्म वृत्रहन्-तमम् ज्येष्ठम् अग्निम् आनवम् ।
यस्य श्रुतर्वा बृहन् आर्क्षः अनीके एधते ॥

Rv. VIII. 63. 4.

Cf. Arktos (The Great Bear) was pursued by her son Arkas (The Little Bear) in the chase.

W. Smith.

Cf. When Rhea was about to give birth to Zeus, she retired to *Kretan-Lyktos* and hid the infant in a cave (Hesiod Theog 477-84), where young Zeus (= Lat. Jupiter = Sk. *Dyaus-pitar*) was nurtured by two Bears, viz. the Great Bear and the Little Bear.

Cf. "Aige" (the star *Brahma-hridaya*) "was assisted in nurturing Zeus by her sister Helike (the Twister = the Rishis), (Hyginus). Aige was changed into the Goat star *Aiz*. Helike into the Bear which twists around the Pole."

R. Brown I. 221.

Brahmā and the *Rishis* guard the Pole-star and twist around him in token thereof. Vide :

यत् एनम् पुरतः कृत्वा ध्रुवम् सप्तर्षयः स्थिताः ॥

V. P. I. 12. 95.

ब्रह्मराशिः विशुद्धः च शुद्धाः च परमर्षयः ।
अर्चिष्यन्तः प्रकाशन्ते ध्रुवं सर्व्वे प्रदक्षिणम् ॥

Rām. VI. 4. 48.

Cf. And the Bear which they likewise call the Wain, which turns round without moving away (Homer. Od. V.).

Cf. The tails of the Bears guard 'the Atlanteian Pole' (Euripides).

R. Brown. I. 264.

The *Rishis* worshipped Skanda. Vide :

अतीव शुशुभे तत्र पूज्यमानः महर्षिभिः ।

Mahā. III. 228. 23.

Cf. "The Bear keeps a watch on Orion."

Homer. Od. V.

Everywhere the seven stars of Ursa are connected with Orion. Vide : "Seek him that maketh the seven stars and Orion."

Amos. V. 8.

The stellar Pea-cock represents one of the phases of *Indra-Satakratu*, king of the Heavens. Vide :

इन्द्रः मयूरः संवृत्तः ।

Rām. VII. 18. 5.

And the pea-hen represents Rādhā. Vide : Brahmānda Purāna—Chapter *Rādhā-hridaya.*

As the constellation is situated a little way off the point called Dhruvabindu (ध्रुवबिन्दु), the celestial Pole, *Indrasrikrishna*, the champion of the blue sky, who represents the starry heaven, very slightly inclines his head to the left, so as to touch the plumes of the pea-hen with it. *Srikrishna* is, therefore, represented as wearing a crest-like head-gear made of pea-fowl's feathers. Vide : *ibid.*

We read in the Rv. X. 109. 4. that the Saptarshis are the 'Gods of old," and they are called the "Fathers" (पितरः) in

Rv. X. 131. 6. They live in *Yama's* home (Rv. X. 135. 7), where they rejoice in his company (Rv. X. 14. 10), and in fact *Yama*, the divine judge is their regent.

यमः पितॄणां अधिपतिः ।

Av. V. 24. 14.

The dead go to them (Rv. X 16. 1 ; 154. 4.) and they punish men for their sins (Rv. X. 15. 6), as councillors of king *Yama*. Cf. "It" (the Great Bear), says Brown, "was particularly connected with *Mul-il*, Lord of the Under-world and Night-world, and in this respect was called *Wul-mo-sarru* (the Lord-of-the-voice-of-the-firmament). In W.A. I. II. XLVIII. 56, *Margidda* itself is described as "Lord of the Ghost-World" (*Ar. Belu-Zakki-mati*), which practically makes it a nocturnal manifestation of *Mul-il*."

R. Brown I. 267.

Compare also, "Haptoiring is entrusted with the charge of the gate and passage of hell."

Minokhired.

Compare again :

"And he had in his right hand seven stars."

"And he laid his right hand upon me, saying

'I have the keys of hell and of death'."

Revelations I. 16-18.

As to the female aspect of the constellation, Brown says:

"Kallisto the mother of Arkas is turned into a Bear and then made into the stars called the Great Bear (Paus. VIII. iii. 2). Kallisto is only *Artemis Kalliste*, the Semetic *Reine Mere*. The beautiful (Kalliste) Phoenician goddess is at once Virgin and mother. *Kallisto-Kalliste*, the beautiful mother goddess is like Rhea connected with the Bear and also with the Semetic East ; and Ursa Major = Kallisto (the beautiful constellation).

The same idea of Ursa Matronalis and the same connection between the Bear and the Semetic goddess, appears in the well-known ritual of Artemis Braunonia. The Bear then is the nurturing fostering creature remarkable in itself."

The reader knows that below the nurturing fostering Bear, lies the stellar Lion, and above her the snake *Takshaka* (Draco).

And the great divine foster-mother *Jagat-Dhātri* (जगत्धात्री) lit., the Nurse of the Universe, sits in her serene majesty upon a Lion, with a snake upon her left shoulder, called the *Nāgopavita* (नागोपवीत) lit. the sacred thread made of a serpent.

It is a great mistake to suppose that such an incongruous symbolism can be the result of any free-thinking.

Note:—The reader will note that the little divine foster-mother, who is worshipped on the sixth lunar day after the new moon by every householder, is not to be confounded with the great divine foster-mother. Because the former is *Shashthi* (षष्ठी) alias *Deva-senā*, a variant of the *Shat-Krittikās* (*a*) of the *Mātrimandala*, and she rides on a cat and not on a lion.

शिशूनाम् प्रतिविम्वेषु प्रतिपालनकारिणी ।
तपस्विनी विष्णुभक्ता कार्त्तिकेयस्य कामिनी ॥

Br. V. P. II.

As to its Stars, *Atri* has diminished in lustre during the last century.

The stars 11, 6, 5, 2, of *Saptarshi* (δ, γ, β, α Ursae Majoris) are said to have been less brilliant formerly. The stars 5 and 2 of *Saptarshi* are called 'the pointers', because they very nearly point towards the star *Dhruva* (ध्रुव) *i.e.*, the Pole-star of the present age.

Of the minor stars of this constellation :

(*a*) The stars 10, 14, 9, 19, 15 and 12 of *Saptarshi* (ι, κ, θ, ν, 23 and o Ursae Majoris) form the figure of a serpent falling downwards. The figure represents the fall of the serpent-king *Nahusha* from the high-heaven. Vide :

ततः तस्मात् विमानाग्रात् प्रच्युतः च्युतलक्षणः ।
प्रपतन् बुबुधे आत्मानम् व्यालीभूतम् अधोमुखम् ।

Mahā. III. 181. 38.

The star 10 in the mouth of the serpent, is the radiant point of the meteoric shower of November 30.

(*b*) The star 17 of *Saptarshi* (ξ Ursa Majoris), a double star and a binary system with a period of 60 years, situated

(*a*) The *Shat-Krittikās* themselves are referred to as the foster-mothers. Rām. I. 38. 23.

just over *Phalguni* alias *Arjuni Nakhatra*, represents the famous *Chakra* (चक्र), literally the wheel, through which the *Lakshya* (लक्ष्य) the target, the Fish's eye, had to be shot. The hero of the Mahābhārata had to pierce this target as a price set down by Drupada (द्रुपद) lit. the world tree, for the marriage of his daughter *Draupadi* (द्रौपदी).

(*c*) The star 20 of *Saptarshi* (80 in Flamesteed's enumeration) is a very little star. But it deserves special notice. The star is called *Arundhati* (अरुन्धती), literally, the red evening ; and in fact the star is a reduplication of the evening. *Arundhati* forms with *Vasishtha* a double to the eye. And the star is therefore called (Ar.) *Alcar*, the attendant.

She lies very close to *Vasishtha* (ζ Ursae Majoris) whose devoted "little wife" she is. In Hindu marriages, the bridegroom has to point out to his bride the star *Arundhati* as the prototype of conjugal devotion. Vide :

हुवा उपत्थाय उपनिष्क्रम्य ध्रुवम् दर्शयति ।
अरुन्धतीम् च ।

Govila II. 3. 3-9.

भवदेवभट्टधृत गोभिलवचनम् ।

Vasishtha is in every way the first of the double stars. *Arundhati* forms with it a double to the eye, but it has also a much closer bright companion.

The reader knows how *Sandhyā* (सन्ध्या), lit. the evening, the daughter of *Brahmā* and the sister of the *Saptarshis*, had to abandon her body, the exquisite charms of which, had captivated her father and brothers ; and how she afterwards assumed a new form under the title of *Arundhati* (अरुन्धती), lit. the evening and married *Vasishtha*. Vide: K. P. II.-III.

In consideration of the legendary tales handed down to us from the archaic period, it is very necessary to bear in mind the simple astronomical facts which underlie them.

The Pole-star is the lord of the starry host and he is also the lord of the evening. *Brahmā* as the presiding deity of *Abhijit*, the earliest known Pole-star, was necessarily the lover of the evening. When *Vasishtha*, one of the seven sages occupied the Polar throne, she had to become his consort.

The seven sages, the creators of the world as the progenitors of all living beings, are called the Fathers ; while their father *Brahmā* is titled *Pitāmaha* the grandfather. Vide :

ब्रह्मात्मभूः सुरज्येष्ठः परमेष्ठी पितामहः ।

Amara.

They figure as the seven *Amesha-Spentas* (*a*) in the Avesta, and *Arundhati*, their sister, as *Ashi Vanguhi*, the fairest. Vide :

1. We sacrifice to *Ashi Vanguhi*.
2. The daughter of *Ahura Māzda*, the sister of the *Amesha Spentas*.........
3. *Ashi* is fair, *Ashi* is radiant with joy ; she is far-piercing with her rays.........

Ashi Yast.

The name *Haptoiring* has occasioned a great deal of controversy in the West. Darmesteter does not translate the name. Prof. Haug (*Haptoiring*=The seven Bears) and Dr. Steingass (*Haftaurang*=The seven Heavens) disagree, and R. Brown favours the latter's view. The Sanskrit analogue of *Haptoiring*, would very likely be *Saptairinga* (सप्तैरिङ्ग=सप्तैः+इङ्ग) 'the goers by seven'.

This meaning of the word accords well with the famous Vedic passage :

"Whither by day depart the stars (*Rikshas*) that shine at night, set high in heaven above us."

Rv. I. 24. 10.

Cf. Jyotiringa (ज्योतिरिङ्ग) (*b*), 'the goer with light' (the glow-worm).

The Saptarshi Mandala is known as *Sātpāyāse-khatle* among the Mahratta peasantry.

Brihath Ratha the Great Chariot seems to have been regarded by the Paurāniks as the elephant Airāvata of Indra.

Cf. "Some tribes have regarded them as being like a bear, whilst others have thought them like an elephant."

Lect. Science of Lang. II. 397.

(*a*) The undying and the well-doing ones.

(*b*) (ज्योतिः+इङ्ग) =Light+Goer.

2. SĀRAMEYA-YUGALA MANDALA [40]

(सारमेय युगल मण्डज)

Lat. *Canes Venatici*

Eng. The Grey hounds or the hunting dogs

Underneath the tail of the Peacock lies a little group.

This constellation was invented by Hevelius in A.D. 1690. But the stars had long been known to the Vedic Rishis as the heavenly Twin dogs, called the two *Kālakanjas*.

Vide : Introduction Ex. VI.

The star 1 = *Jyeshtha Kālakanja* (ज्येष्ठ कालकञ्ज)
= Cor-Caroli.
The star 2 = *Kanishtha Kālakanja* (कनिष्ठ कालकञ्ज)

The star 1 (α Canum Venaticorum) is known as *Cor-Caroli*, or "Charle's Heart," so called because Sir C. Scarborough declared that it shone with a peculiar brightness the night before Charles II. made his entry into London on his restoration (E. W. Maunder).

3. KARIMUNDA MANDALA [50]

(करिमुण्ड मण्डल)

Lit. The head of the Elephant

Rv. *Urna-nābhi-Mandala* (ऊर्णनाभिमण्डल) lit. the constellation of the spiders

Gr. *Plokamos* (The Tress)
Lat. *Coma Berenices* (= The Tress of Berenice)
Eng. The Tress

Below the twin *Kālakanja* dogs there lies a fine cluster of very small stars.

We have fully dealt with the story of the construction and demolition of the *Rauhina*-Tower (vide, Introduction, Ex. VI). The reader remembers that its two chief masons went up and became the twin dogs, and the rest tumbled down and became spiders. We shall only add here that the spiders originally formed the constellation, into which, later an, was located the huge elephant of Bhagadatta king of Prāk-Jyotisha (Assam).

Cf. what the astronomer Serviss wrote of the constellation :

"You will perceive a curious twinkling as if gossamer, spankled with dew-drops, was entangled here. One might think the old woman of nursery rhyme, who went to sweep the cobwebs out of the sky, had skipped this corner or else that its delicate beauty had preserved it from her house-wifely instincts" (Maunder p. 46).

It is noticeable that the actual configuration of the stars in this constellation suggests the figure of an elephant's head (*a*). The Hindu star-gazers of old also evidently perceived the same figure in the constellation. Otherwise Hindu Astro-theogony would not have represented the presiding goddess of the 6th Sign of the Solar Zodiac as riding on an elephant.

We have drawn the figure of the constellation accordingly.

The stellar-head of the Elephant in question, situated as it is to the right of the Virgin Mother, reminds one of *Ganesa* the lord of a multitude.

This constellation, says Prof. Peck, was invented by Tycho Brahe in A.D. 1603.

"But the tress (Plokamas) of Berenike, queen of Ptolemaias Energetes", says Brown, "was by the united efforts of Konon, the astronomer of Samos, and Kallimachos the Alexandrian Grammarian poet, raised to the skies, B.C. 243."

The story of its naming, says Maunder, is that Berenice, the queen and sister of Ptolemy Energetes vowed her beautiful hair to Aphrodite, should her consort return safely from an expedition on which he had set out. The consecrated tress was stolen from the temple soon after its dedication. And Conon, the royal astronomer of Alexandria, declared that the goddess had caught the tress up to heaven, in proof whereof he pointed out the constellation to the king and queen.

(*a*) The numerous stars of this cluster may have been called Gana-Devas (गणदेवाः), and their presiding deity *Ganesa* (गणेश), on whose rising in the east, *Parasurāma* in Parasu Mandala sets in. This phenomenon gave rise to the statement in the Brahma Vaivarta Purāna, that *Ganesa* caused *Parasurāma* to revolve round the heavens. Vide : Br. V. P. III. 43.

KANYĀ RĀSI

(कन्याराशि)

Pres. Divinity : *Budha* (बुध) Mercury

This *Rāsi* is the sixth division of the solar zodiac. It lies to the east of the *Simha Rāsi* and comprises the eastern portion of Simha Mandala, the whole of Suparna Mandala and the western portion of Kanyā Mandala. But the *Rāsi* consists of the last three *pādas* or quarters of the *Nakshatra* (space) *U. Phalguni*, the whole of the *Nakshatra Svāti* and the first half of the *Nakshatru Chitrā*.

KANYĀ MANDALA [139]

(कन्या मण्डल)

Lit. the (Heaven) daughter

Rv. *Apah* Pur. *Kumāri* (कुमारी) (the heaven daughter)	Sum. Ak. *Abnam* (the proclaimer of rain) Sum. Ak. *Istar* (Heaven daughter) Sem. *Ashtoreth* Gr. *Astarte*
Sat. Br. *Sukanyā* (सुकन्या) (the beautiful girl) Mahā. *Sāvitri* (सावित्री) (the consort of the Sun)	
Rām. *Savari* (शवरी) (The huntress)	Gr. *Artemis* (the huntress)
Mahā. *Prithā* (पृथा) (The Great Lady) Pur. *Sati* (सती) (the chaste one)	Gr. *Parthenos* (the Virgin) Lat. *Virgo* (the Virgin) Eng. the Virgin
Pur. *Sukesi* (सुकेशी) (one having beautiful tresses) Pur. *Mohini* (मोहिनी) (the enchantress)	Sem. *Ariadne* (the very chaste one) Gr. *Kalli-plokamos* (one having beautiful tresses) Ph. *Erek-hayim* (the Virgin)

Hin. Astrology. *Pātheya* (पाथेय)

"The chief stars of the Virgin, six in number, make an irregular capital Y, lying on its side, the stem and the lower branch of the Y, very nearly marking the Ecliptic" (Maunder).

The star 1 (α Virginis) called *Tārā* (तारा) is of bluish-white colour, and the stars 3 and 5 (ϵ and β Virginis) are of yellow colour ; while the star 6 (δ Virginis) is of red and the rest of white colour. The Mandala is therefore said to be *Vichitrā* (विचित्रा) or variegated in colour. Vide :

अरुण सित हरित पाटल पाण्डु विचित्राः ।

The star 1 is in the forehead, the star 2 called *Nābhitārā* (नाभितारा), a binary system with a period of 170 years, is in the navel, the stars 6 and 3 form the left leg, and the stars 9 and 5, the right leg of the stellar *Kanyā*.

Close below Virgo are the constellations *Kāmsya* (कांस्य), "the Cup" of ambrosia, and *Suparna* (सुपर्ण), the Eagle, the Cup being underneath the Virgin's feet.

The presiding goddess of the sixth division of the solar zodiac is the Virgin and mother, called *Kanyā* (कन्या) (*a*).

In India she represents the female divine power, representing the Sun, the Moon and Venus and holding in her left hand the star *Apāmvatsa* a variant of *Apām Napāt* (अपां नपात्) the Fire-God—Orion, and a ear of corn (emblem of the Moon) in the other. She rides on the solar *Nau* (नौ) the boat. Vide:

जले नौकास्थ-शस्याग्निधारिणी स्त्री ।

Manohara.

मध्ये दिवः तरणिं भ्राजमानम् ।

Av. XIII. 2. 36.

Note :

तरणिम् सूर्य्यम् इति सायणः ।

On the banks of the Euphrates, she is the reduplication of Istar-Venus, holding a ear of corn in her hand and *Duzi* (Orion = Sk. *Skanda*) on her knees (Robert Brown II. 44).

(*a*) *Sivā* (शिवा), the wife of Siva (शिव), appeared in the form of a Virgin before the gods. Vide :

कन्यारूपेण देवानाम् अग्रतः दर्शनं ददौ ।

V. D. P. I. 19. 62.

"The representations of the Greek Artemis show her either as a huntress or as the goddess of the Moon. As a huntress her attributes are the bow, quiver and arrows or a spear, stags and dogs. As the goddess of the Moon, she wears a long robe which reaches down to her feet, a veil covers her head and above her forehead rises the crescent of the moon. In her hand she often appears holding a torch."

W. Smith.

Note. The fire or torch may well be the symbol of Orion, and the crescent moon represents the third eye of the great goddess mother.

Amongst other Hindu names for *Kanyā* are *Āpah* (आपः) the waters ; and *Savari* (शवरी), the Huntress. The first name is preserved in the name *Āpa* (आप) for the star 6 *Kanyāyāh* and the second name, we believe, in the name for 3 *Kanyāyāh*. In Babylon the Sign was called *Abnam*, the watering channel. In India the autumnal equinox at the eastern extremity of the Sign, is called the *Jala-Vishuva-Samkrānti*, (जलविषुवसंक्रान्ति) lit. the watery Equinox.

Savari has a tale of her own to tell.

On the western shore of the *Pampā*, says the Rāmāyana, the fine hermitage of *Matanga* lies deep in the woods, and there lives the immortal votaress named *Savari* (शवरी) who served the vanished anchorites, the disciples of *Matanga*. (*a*) Vide :

ततः तत् राम पम्पायाः तीरम् आश्रित्य पश्चिमम् ।
आश्रमस्थानम् अतुलम् गुह्यं काकुत्स्थ पश्यसि ॥२८
मतङ्गवनमित्येव विश्रुतं रघुनन्दन ।३०
मतङ्गशिष्याः तत्रासन् ऋषयः सुसमाहिताः ।।२३
तेषाम् गतानाम् अद्यापि दृश्यते परिचारिणी ।
श्रमणी शवरी नाम काकुत्स्थ चिरजीविनी ।।२६

Rām. III. 73.

On the approach of the brothers, *Siddhā* rose to her feet with hands joined, and touched their feet. Vide :

(*a*) As such the *Rishis* may well be called *Mātangas*. A punning etymology connected their name with the elephant *Airāvata*. In the Rig-Veda no mention of the famous *Airāvata* of *Indra* is found.

तौ तु दृष्ट्वा तदा सिद्धा समुत्थाय कृताञ्जलिः ।
पादौ जग्राह रामस्य लक्ष्मणस्य च धीमतः ॥६

Rām. III. 74. 6.

'On your arrival to *Chitra-Kuta*' said she to *Rāma*, 'my *Gurus* (the seven *Rishis*) flew to their heavenly mansions (stars in the constellation *Chitra Sikhandi Mandala*) in dazzling chariots, enjoining me to stay here till your arrival and to offer you hospitality.' Vide :

चित्रकूटम् त्वयि प्राप्ते विमानैः अतुलप्रभैः ।
इतः ते दिवम् आरूढाः यान् अहम् पर्य्याचारिषम् ॥१४
तैः च अहम् उक्ता धर्म्मज्ञैः महाभागैः महर्षिभिः ।
आगमिषप्रति ते रामः सुपुण्यम् इमम् आश्रमम् ॥१५
सः ते प्रतिग्टहीतव्यः सौमित्रिसहितोऽतिथिः ।१६

Rām. III. 74. 14-16.

'Their mandate induced me to collect (*a*) all the fruits that grow on the banks of the *Pampā*, and I offer them to you.' Vide :

एवम् उक्त्वा महाभागैः तदा अहम् पुरुषर्षभ ।
मया तु सञ्चितम् वन्यम् विविधम् पुरुषर्षभ ॥

Rām. III. 74. 17.

She tasted the fruits to test their sweetness, and then gave them to her guests. Vide :

स्वयं आस्वाद्य माधुर्य्यं परीक्ष्य परिभक्ष्य च ।
पश्चात् निवेदयामास राघवाभ्यां दृढ़व्रता ॥

P. P. V. 98.

Therefore, *Savari* = the Gleaning Maid.

Then *Rāma* said to the votaress whose holy vows were perfected, "I have been duly honoured ; Go where you be pleased to live." Vide:

ताम् उवाच ततः रामः शवरीम् संशितव्रताम् ।
अर्च्चितोऽहं त्वया भद्रे गच्छ कामम् यथासुखम् ॥३१

Rām. III. 74. 31.

With the permission of Rāma, she resigned her body to the flames and like burning fire, she rose to heaven. And like a

(*a*) Cf. The star 3 *Kanyāyāh* (= ε Virginis) is (Gr.) *Protrygeter* (= the fruit-plucking-herald), (Lat.) *Vindemiatrix* (= the Vintage-herald), and (Eng.) the Gleaning Maid ; and we propose to call it *Savari*.

flame of lightning, she illuminates that part of the heavens where she rests near the seven Rishis. Vide :

अनुज्ञाता तु रामेण हुत्वा आत्मानम् हुताशने ।३२
ज्वलत्-पावक-संकाशा स्वर्गम् एव जगाम ह ।।३३
विराजयन्ति तम् देशम् विद्युत् सौदामिनी यथा ।।३४
यत्र ते सुकृतात्मानः विहरन्ति महर्षयः ।३५

Rām. III. 74. 32-35.

The immortal *Savarī*, called *Siddhā* (सिद्धा), living in the neighbourhood of the Rishis, cannot but be the consort of the divine *Savara*, commonly called *Kirāta* (किरात) the hunter, *i.e.*, *Siva-Bhutesa* (शिवभूतेश), and *Savari* is known as the constellation *Kanyā* (कन्या) in heaven. It is interesting to note that *Savari* is associated with fruit (फलम्) and fire which *Kanyā* holds in her hands. Vide :

जले नौकास्थ-शस्याग्निधारिणी स्त्री ।

इति दीपिका ।

Cf. With Aratos, the Virgin is *Astraea*, the spirit of Justice, once in the Golden age, a dweller amongst the men. But when an inferior race in the Silver age succeeded their fathers, she withdrew to the mountains, and fled thence to the sky when the Brazen race fashioned murderous weapons and devoured the flesh of plough-oxen for their food (Maunder).

In the Mahābhārata, *Kanyā* re-appears as *Prithā* (पृथा) lit. the great Lady, *i.e.*, the earth (cf. Gr. *Parthenos*), and as such she is the consort of King *Pāndu* (= the stellar Lion of *Pāndu* colour, presided over by the solar God). Vide :

अरुण सित हरित पाटल पाण्डुविचित्राः ।

इति ज्योतिषतत्त्व ।

Prithvi (पृथ्वी) or *Umā* (उमा) is therefore reduplicated in *Kanyā* again, and as such she is the consort of the Lance-holder himself. Vide :

उमापृथिवी ।

Nir. XII. 4. 9.

Vide also,

खड्गिनी शूलिनी घोरा गदिनी चक्रिणी तथा ।

इति देवीमाहात्म्यम् ।

12

Later on, *Kanyā* is again represented by *Draupadi*. The goddess *Sri* (Venus) is said to be a daughter of the Lance-holder *Siva-Bhutesa* (Gr. Bootes) who had to come down to the earth and take her birth as *Draupadi* for her love for the *Pāndavas*, and who was taken back to heaven after the war of *Kurukshetra*. Vide :

तथा ददर्श पाञ्चालीम् कमलोत्पलमालिनीम् ।
वपुषा स्वर्गम् आक्रम्य तिष्ठन्तीम् अर्कवर्च्चसम् ॥१०
श्रीः एषा द्रौपदीरूपा त्वदर्थे मानुषम् गताः ।१२
रति-अर्थम् भवताम् हि एषा निर्म्मिता शूलपाणिना ॥१३

Mahā. XVIII. 4. 10-13.

This fact leads us to call the star 5 *Kanyāyāh* (= β Virginis) *Draupadi* (द्रौपदी) the daughter of *Drupada*, the world-tree (*a*).

This story reminds one of the Greek *Erigone* daughter of Icarius (=Bootes), the wine-drinker, both of whom were translated to heaven as *Parthenos* (Lat. Virgo) and *Bootes* (vide, Smith's Classical Dictionary.) *Duhsāsana* is said to have laid violent hands on the robes of *Draupadi*. Vide, Mahābhārata II. 66.

Cf. 'Thus we meet', says R. Brown in describing the constellation-subjects in Euphratean arts, 'with *Istar* (*a*) as a warrior goddess, despoiled of her garments in the under-world.'

As *Sukanyā*, she is the faithful consort of *Kyavana*, the planet *Sani* (Saturn).

Vide, Sat. Br. IV. 15. 1-13.

As *Sāvitri*, she is the devoted bride of *Satyavān* (Av. X. 8. 42) alias *Ritavān* (Rv. II. 27. 4), the God of Truth—the Sun-God. And the reader is no doubt familiar with the story of her rescuing her dying bridegroom from the clutches of *Yama* the Death-God.

Cf. "And her (*Istar's*) errand is to seek her lost bridegroom *Duwuzi-Tammaz* (the Sun-God) in the under-world, as described in the now familiar legend of the Descent of *Istar*."

R. Brown I. 65.

(*a*) Cf. '*Istar* originally represented the Moon in its female phase (Luna.) But *Istar* was subsequently identified with the planet Venus, and her stellar constellational reduplication is the Sign Virgo.'

R. Brown. I. 64.

As *Sukesi* she is the consort of *Rudra* the Sun-God, and mother of Mars, whose constellational reduplication is the gorgeous Orion.

V. P. 1. 8. 6-10.

And lastly as *Mohini*, she got possession of the 'Cup' of *Amrita*, by enchanting the *Asuras* with her charms, but was deceived in her turn by *Rāhu* (Hydra). Rām. I. 45.

"In the Euphratean sphere it seems," says R. Brown, "that the figure of a dog was placed behind the Lion." In a Graeco-Babylonean Tablet, 6 Simhasya (θ Leonis) was called "the end of the tail of the dog of the Lion". The XIIIth Arabian *Manjil* consisting of the stars 5, 9, 2, 6 and 3, *Kanyāyāh* (β, η, γ, δ, and ϵ Virginis) is called *Al-auwa* (the Howler). And 5 *Kanyāyāh* (β Virginis) is called *Zavizava* (the retreat of the Barker), and 2 *Kanyāyāh* (γ Virginis) at the angle of the five stars, *Zawiyah-auwa* (the barker's corner).

Nergal, the Death-God, presides over the asterism XVI of the Tablet of the thirty stars, consisting of the stars 9, 2, 6 and 3 *Kanyāyāh* (η, γ, δ and ϵ Virginis); and in the disguise of a dog, *Yama* the Divine Judge of the Hindu theogony, followed the famous five *Pāndava* brothers while they were ascending to heaven.

Kanyā seems to be the patron constellation of the city of Kanyāpura (Cawnpur or Kanpur) and *Kumāri*, that of our southern peninsula Kumārikā.

THE NAKSHATRA CHITRĀ

(चित्रा नक्षत्र)

Pres. Deity : *Tvashtā* (त्वष्टा) (the carpenter of the world) (*a*)
Ak. *Kakkab Sakh. Ilu Da-mu* (the asterism of prosperity, god of the sky-furrow)

According to the S. Siddhānta, the Nakshatra *Chitrā* is composed of several stars ; but the Paurānik astronomers allot to it only a single star 1 *Kanyāyāh* (α Virginis) called *Tārā*. The S. Siddhānta puts the star at Lat. 1°30′ S. and Long. 180°,

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(*a*) According to the Black Yv. *Indra.*

and Colebrooke and others have identified it with the star Spica. In the Vedic age the Nakshatra had also one star. Vide :

इन्द्रस्य चित्रा ।

Tait. Br. I. 4. 7. 4.

त्वष्ट्रे स्वाहा चित्रायै स्वाहा ।

T. Br. III. 1. 4.

As to the origin of the Nakshatra's name, vide, Introduction Ex. VI.

The month-name *Chaitra* is derived from the Nakshatra *Chitrā*.

It is interesting to find that in the Euphratean Scheme, the asterisms XIII and XIV are connected with the "Temple of the hosts of Earth" (The Tower of Babel?). The two asterisms answer the Nakshatra X and XI of the modern Hindu Lunar Zodiac, *viz.*, *Maghā* and *P. Phalguni*.

In Indian Almanacs *Chitrā* is represented as a goddess with ten arms.

THE STAR "TĀRĀ"

("तारा" तारा)

Ak. *Supa* (The lustrous)
Bab. *Nebittu Saziri* (The one called the Ear of corn)
Ph. *Zera* (Ear of corn)
Eg. *Repa* (The Lord)
Sem. *Al-simak* (The Prop)
Gr. *Stachys* (Ear of corn)
Lat. *Spica* (Ear of corn)
Eng. The Ear of corn
Gr. *Mikros-Kantataros* (The little lance-holder) (*a*)

First, we have *Sati*, the Virgin Mother, as a single star, *Tārā* ; then *Sati*, the Virgin Mother, as an asterism, Chitrā, consisting of the star *Tārā* with some adjoining stars ; and ultimately when it is thought necessary that the constellation should be spread as far as possible over the ecliptic, we arrive

(*a*) The Hindu goddess *Tārā* holds a *trisula* or *sula* (शूल) the lance. Vide :

खड्गिनी शूलिनी घोरा: ··· । इति देवीमाहात्मत्रम् ।

at the full figure of *Sati* as a constellation, Kanyā ; there being a striking natural resemblance between the form portrayed and the actual arrangement of the stars. The sacred and all-pervading body of *Sati-Tārā* is punningly said to have been cut into fifty-one oldest known constellations, the objects of adoration of the astro-theogonical school of worshippers.

THE OLD NAKSHATRA SVĀTI

(प्राचीन स्वाति नक्षत्र)

Ak. *Uz* (The goat) Sem. *Enzu* (The goat)
Bab. *Kakkab Lulim* (= the asterism-of-the-goat)

This asterism, says Brown, includes the stars 10, 13 and 14, *Kanyāyāh* ($=\iota$, κ, and λ Virginis), and is called in the Persian and Indian schemes 'the Good-goer' *i.e.*, the leading goat of the flock.

THE STAR SAVARI

(शवरी तारा)

The star 3 of Kanyā = ϵ Virginis
Gr. *Protrygiter*
Lat. *Vindemiatrix*
Eng. Fruit-plucking herald

From its being connected in time with the vintage, the star appears to have attracted more attention than what its mere brightness seems to warrant.

THE STAR ĀPA

(आप तारा)

Lit. The waters
6 of *Kanyā*=δ Virginis

This is a star of historical importance, because with the stars *Tārā* and *Apām-vatsa*, the star gives a fair idea of the Equinoctial Colure of the time when the Hindu zodiac was made a fixed one.

The star forms the left knee of *Kanyā*.

The star is a reduplication of *Āpah* (आप:), the waters, the mother of *Skanda*. The S. Siddhānta gives the Lat. and Long. of the star, *viz*., 9°N and VI. 0° respectively.

THE STAR APĀM-VATSA

(अपाम् वत्स तारा)

Lit. The child of the water
11 of *Kanyā* = θ Virginis

The star is a reduplication of *Apām-napāt* "the child of the waters" (*Skanda*-Orion), and its name *Apām-vatsa* is a variant form of *Apām-napāt*. The S. Siddhānta gives the Lat. and Long. of the star, *viz*., 3° N. and VI. 0° respectively.

The names of the two stars—*Āpa* and *Apām-vatsa*—have a close affinity to *Abnam*, the Akkadian name of Virgo. And the natural configuration of the stars in the constellation, evidently shows θ Virginis to be the child in the lap of the Virgin mother. But as it is, "Early Christian thought recognized a reference to the promise of 'the Seed of the Woman' of Genesis iii. 15, in 'the ear of the corn' (Spica) the Virgin carries in her hand, and the expression in Shakespeare's play of Titus Andronicus, 'the good boy in Virgin's lap' refers to the Mediaeval (Christian) representation of the Sign as the Madonna and Child" (Maunder).

It is remarkable that the Siddhāntas place the star *Apām-vatsa* (θ Virginis)in *Kanyā's* lap : *Apām-vatsa* being another name of the Vedic *Apām-napāt*, "the child of the waters" (=Prince *Skanda* of the Mahābhārata).

5. SUPARNA MANDALA

(सुपर्ण मण्डल)

Pres. deity : *Savitā* (सविता), the Sun

Ak. *Im-dugud-khu* (The great storm-bird)
Sem. *Ramānu-ikabbid* (The storm-god is terrible)
Ph. *Ouraib* (The crow)
Gr. *Korax* (The crow)
Lat. *Corvus* (The raven)
Eng. The crow

The Ecliptic passes through the middle of Virgo, below which lies the constellation of the bird *Suparna* (सुपर्ण), lit. the

strong-winged. The Sun stands over *Suparna* at the latter part of the month of Āsvina (Sept.-Oct.). The Sun is therefore said to ride on *Suparna*, and he is its presiding God (*a*). *Suparna* is therefore called *Etasa* (एतश) (*b*), the horse of the Sun.

Suparna is represented as an eagle with the head of a horse.

For further particulars, vide, Vithi. X. Garuda.

Suparna is said to be a son of *Vinatā* (विनता) lit. "the sloping one", *i.e.*, the sloping Hydra who sucks her child *Suparna.*

Cf. Tiamat (Hydra) gave the brood of crows suck (Brown, I. 109).

Taimat is the Euphratean sister of the Indian serpent *Taimāta.* Vide. Av. V. 15. 6 ; 18. 4.

THE NAKSHATRA HASTĀ

(हस्तानक्षत्र)

Pres. deity : *Savitā* (सविता), The Sun

Euph. Asterism No. XVIII	
Kakkab Ansu Kur-ra (The asterism of the animal from the East ; *i.e.*, the horse)	*Ilu-Imdugud-Khu* (The God, the great Storm-Bird)

The stars 1, 2, 3, 4 and 5 of *Suparna* (= β, γ, δ, ϵ, and α Corvi) constitute this asterism. The stars form the figure of a man's hand. The star 1 is at the wrist, and the stars 3, 2, 4, and 5 represent the four fingers, excepting the middle one ; and we have named the stars accordingly. The S. Siddhānta places the *Yogatārā* at Lat. 11°S and Long. V. 20° ; and Messrs Colebrooke and Burgess identify the star with the star 3 *Suparnasya* (= δ Corvi).

The star 6 *Suparnasya* (ζ Corvi, a faint star midway between the stars 1 and 4) is an opera-glass double star.

(*a*) Vide :
सुपर्णः अङ्ग सवितुः गरुत्मान् पूर्व्वः जातः सः उ अस्य अनु धर्म्म ॥
Rv. X. 149. 3.

(*b*) यत् ईम् आशुः वहति देवः एतशः विश्वस्मै चक्षसे अरम् ॥
Rv. VII. 66. 14.

Note : The reader will observe that in the Euphratean scheme, the constellation is the crow and the asterism is the horse, while in India the constellation is the Eagle, a horse-headed bird.

Cf. "The horse and the crow are depicted next to each other. There is thus a close connection between the Lunar Zodiac Asterism of the Horse and the constellation Corvus, the *Kakkab Kurra* being ultimately identical with *Kakkab Im-dugud-Khu*" (R. Brown. ii 84-5).

6. KĀMSYA MANDALA [13]

(कांस्यमण्डल)

Lat. The cup.

Ak. *Lut-tsir na* (The cup of the snake)
Gr. *Kreter* (The cup)
Lat. *Crater* (The cup)
Ph. *Asour* (The cup)
Eng. The cup
Sem. *Karpat-Tsiri* (Bowl of the snake)

We have translated the constellation-name. But the cup being close to *Rāhu*, it may well be connected with the vessel *Amrita* which *Vishnu* in the disguise of *Mohini* received in her hand from the infatuated Asuras and from which he poured down nectar (अमृत) to the Gods, excluding the Asuras who did yeoman's service in churning the Upper Deep, to get the *Amrita* out of it. *Rāhu* (Hydra) in the disguise of a *Deva* (God) did drink it. But when the fraud was detected, an uproar ensued and in the tumult *Vishnu* must have thrown down the cup and taken up his *Chakra* to cut off the head of the fleeing serpent.

The star 2 *Kāmsyasya* (α Crateris) forms the pedestal of the cup, and the four stars 5, 4, 1, and 6 *Kāmsyasya* (ζ, γ, δ, and θ, Crateris), arranged in a bad semicircle, mark the bowl of the cup, the stars 4 and 1 being at the bottom of the bowl.

The cup is on the point of being upset. Vide, Mahā. I. 19.

7. TRISANKU MANDALA [16]

(त्रिशङ्कुमण्डल)

Lat. *Crux* Eng. The Southern cross

The constellation Crux was invented by Royer in 1679 A.D. In India or rather to the Hindus the constellation was known from long before.

The Sun as the upholder of Truth (Sk. *Ritam*) or the Law of the Universe, is called *Satya-dharmā* and *Ritavān* in the Vedas, (vide Av. X. 8. 42 and Rv. II. 27. 4), and *Satyavrata* and *Satyavān* in the Purānas. He was not born to enter the heavens, but was destined to be born and to die in the *Antariksha* (अन्तरीक्ष) or the mid-region between the earth and the heavens. Vide, Rv. X. 72. 8-9 and vide also, Introduction. Ex. VIII.

The Sun-God has three *Padas* (पद) lit. stations, one at the rising hill, one at mid-heaven and the third at the setting hill. Vide :

त्रीणि पदा विचक्रमे विष्णुः ।

Rv. I. 22. 18.

These three stations are naturally regarded as the Sun's three posts or pegs (Sk. *Sanku* = शङ्कु) *i.e.*, resting places.

From this fact the solar hero came to be represented as King *Trisanku* (त्रिशङ्कु) or the 'three-stationed'.

Then again the Sun goes up to (1) the Northern Solstice in the *Deva-bhāga*, but cannot rise higher and he has to retrace his steps southwards and crossing (2) the Equinox he goes down to (3) the Southern Solstice in the *Asurabhāga*, but no further.

This astronomical phenomenon gave rise to the Paurānik story of King *Satyavrata*, surnamed *Trisanku* (*a*). King *Satyavrata*, says *Vālmiki*, was the son of King *Prithu* of the Solar race. He committed three sins which turned into *Sankus*, and he could not therefore enter the heavens.

From his three *Sankus*, the king came to be known as *Trisanku*, and he asked his family priest *Brahmarshi Vasishtha* to perform a *yajna* for his translation to heaven. *Vasishtha* refused

(*a*) Cf. "*Dius Fidius*, as well as *Sancus* was originally the name of Jupiter." Max Müller. p. 151.

to officiate in the *yajna* of a king guilty of three sins. The king went over to *Rishi Visvāmitra*, who commenced the *yajna* (यज्ञ), but the gods did not accept the offerings. *Visvāmitra* made a gift of his own righteousness to the king and advised him to go to heaven. The King began to ascend to the heavens. On his nearing "the vernal equinox" (=the gate of heaven) below the star *Agni* about B.C. 4250, Indra ordered him to go down and the king began to fall headlong earthwards, calling upon his priest newly elected, to protect him. This enraged the *Rishi* who enjoined him to stay, and created another heaven in the south for the king's residence with a counter set of *Dhruvas* (Pole-stars), *Saptarshis* (the seven Rishis), and other constellations, *Nakshatras* and stars, and was about to create a second *Indra* to reign over the heaven created by himself, when a concordat was effected between the antagonistic parties.

The *Asurabhāga* or the Southern Heaven with its constellations, *Nakshatras*, stars and circle of *Dhruva-tārās* created by *Visvāmitra* the Paurānik brother of the Avestic Angra-Mainyu (*a*), was recognised as a part of heaven itself, and *Trisanku* was allowed to stay there as a Deva (देव) in his falling posture (*b*) with the *Maharshi Vasishtha* (*c*) below him. Orion with its three belt-stars, represents King *Trisanku* with his three sins

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(*a*) Of the heavenly bodies, Angra-Mainyu (Sk. अघमन्यु) or the evil principle, is said to have created the planets and Ahura Māzda (Sk. असुरमस्त) or *Asura* the great, *i.e.*, the good principle is said to have created the stars. Vide Avesta.

(*b*) स्वर्गः अस्तु सशरीरस्य त्रिशङ्कोः अस्य शाश्वतः ।
नक्षत्राणि च सर्व्वाणि मामकानि ध्रुवानि अथः ॥
यावत् लोकाः धरिष्यन्ति तिष्ठन्तु एतानि सर्व्वशः ।
मत्कृतानि ... ... ।

Rām. I. 60.28-29.

(*c*) The story of the translation of *Trisanku* to heaven by *Visvāmitra* would naturally lead one to suppose that it was *Rishi Visvāmitra*, who was with *Trisanku* at the time of his fall from heaven, and in accordance with this supposition the star 1 of *Trisanku* was named *Visvāmitra* in my 'Atlas of Hindu Astronomy'. On a further consideration, we think that the opinion of the holy saint Rāmānuja Svāmi should be followed.

entering heaven, half of his body being above and half below the celestial Equator. And the three stars 2, 3, and 4 of Trisanku Mandala (β, γ, and δ Crucis) represent King *Trisanku* in his "headlong downfall", and the star 1 *Trisankoh* (α Crucis) represents his priest *Vasishtha*. *Vālmiki* notes the fact when he makes *Lakshmana* say to *Rāma* while marching on to *Lankā*.

> "And great Trisanku, glorious king
> Ikshaku's son from whom we spring
> Beams in unclouded glory near
> His holy priest whom all revere"
>
> Prof. Griffith.

Vide :

> त्रिशङ्कुः विमलः भाति राजर्षिः सपुरोहितः ।
> पितामहः पुरः अस्माकं इक्ष्वाकूणाम् महात्मनाम् ॥
>
> Rām. VI. 4. 49.

And the holy sage Rāmānuja Svāmi (A. D. 1128) explains the passage, observing that the constellation lies in the South with the star *Vasishtha*, the priest of the solar race, in it.

सपुरोहितः वशिष्ठसहितः इत्यर्थः ईदृशः त्रिशङ्कुः अस्माकम् पुरः भाति । तस्य दक्षिणदिक्स्थत्वात् ।

Vide, the Svāmi's Commentary on Rām. VI. 4. 49.

The contest between *Vasishtha* (the Vedic brother of the Avestic Ahura Māzda) and *Visvāmitra* the Indian Angra Mainyu, for the possession of the mundane cow (=*Aditi*, the northern half of the Galaxy, or the Earth) is a proverbial one. Vide, Rām. I. 53-56.

A story is related by the great scholiast Sāyana Āchāryya, in which the star 1 *Trisankoh* (α Crucis) appears to represent *Brahmarshi Vasishtha*, and the three stars 2, 3 and 4 *Trisankoh* (β, γ, and δ Crucis), the (three-headed) watch-dog of *Yama*. The legendary tale speaks of the hungry *Vasishtha's* being attacked by the watch-dog of *Yama*, during his thieving excur-

sions into *Yama's* storehouse. The dog re-appears as the three-headed Cerberes in Greece. Vide, Sāyana's notes on Rv. VII. 55.

8. MAKSHIKĀ MANDALA [35]

(मक्षिकामण्डल)

This constellation was discovered by Bayer in 1803 A.D. We have translated the constellation-name.

VITHI VII

This *Vithi* comprises the following constellations:

1. Sisumāra Mandala (शिशुमार मण्डल)
2. Bhutesa Mandala (भूतेश मण्डल)
3. Tulā Mandala (तुला मण्डल)
4. Sārdula Mandala (शार्दूल मण्डल)
5. Mahishāsura Mandala (महिषासुर मण्डल)
6. Vritta Mandala (वृत्त मण्डल)
7. Dhumrāt Mandala (धुम्राट् मण्डल)

1. SISUMĀRA MANDALA (Ursa Minor)

(शिशुमार मण्डल)

Sisumāra Mandala or Dhruva Matsya (Ursa Minor) stands at the top of Vithi VII(*a*).

This constellation consists of seven stars. Dharmatārā or 1 *Sisumārasya* lies at the head of the constellation and Dhruvatārā or 2 *Sisumārasya* ($= \alpha$ Ursa Minoris) lies at the tail of Sisumāra Mandala. It is stated that by observing the Dhruvatārā during night one may be free of any sins committed during the day. Dharmatārā is situated at a distance of 8 cubits south of Dhruvatārā and Indratārā (3 *Sisumārasya*) is situated 2 cubits away from Dharmatārā and lies at the mouth of Sisumāra Mandala.

2. BHUTESA MANDALA (Bootes)

(भूतेश मण्डल)

This constellation consists of stars of yellow colour as that of the Sun. It lies to the north of the constellation Kanyā. If the curved tail of Chitrā Sikhandi is extended to the star 'Tārā', the brilliant star *Nishthya* (Arcturus $= \alpha$ Bootes) will be seen. The Nishthya tārā lies at the middle of the curved line.

(*a*) तारामयं भगवतः शिशुमाराकृति प्रभोः ।
दिवि रूपं हरेर्यत्तु तस्य पुच्छे स्थितः ध्रुवः ॥
इति विष्णुपुराणम् २।९।१

Nishthya is also seen by joining the line between Pulaha and Kratu. The observer will also reach near Nishthya if the line joining Draupadi and Savari is extended. The beauty of this star attracts the heart of the observer so much that the observer cannot forget it. Hiranya-chakratārā is situated at a distance of 4 cubits east of Nishthya.

NAKSHATRA SVĀTI (*a*)

(स्वाति नक्षत्र)

Presiding Deity : *Pavana*

Svāti is the fifteenth nakshatra of the lunar zodiac. The nakshatra has only a single star of *Kumkum Varna*. The name of the star is *Nishthyá* (Arcturus = α Bootes). Svāti nakshatra lies to the north of Chitrā nakshatra. The name *Svāti* or Kharga has been given to it as the rays of Nishthya tārā removes darkness (*tamah*).

3. TULĀ MANDALA (Libra)

(तुला मण्डल)

Presiding Deity : The planet Venus (शुक्रग्रह)

Tulā is the seventh rāsi of the solar zodiac. It consists of five stars. 1 *Tulasya* (Saumya Kilaka or β Libra) lies distant east of the star Tārā. Nishthya, Tārā and Saumya Kilaka form an isosceles triangle. Nishthya is situated at the top of this triangle. 3 *Tulasya* (*Tarit*) lies at the south of Saumya Kilaka. Saumya Kilaka and Tarit are situated at the northern and southern sides of *tulādanda* (balance). 2 *Tulasya* (Yāmya Kilaka) lies at the top of tulādanda just in the west from the middle of tulādanda. 6 *Sārdulasya* lying to the south-east of Tarit tārā and 3 *Sarpasya* lying at the north-east of the Saumya Kilaka are supposed to represent the two carriers of the *tulādanda* (balance). The nakshatra *Visākhā* lies in Tulā Mandala.

(*a*) कुङ्कुमारुणतरैकतारकः ॥ इति कालिदासः ।

THE NAKSHATRA VISĀKHĀ OR RĀDHĀ (*a*)

(विशाखा वा राधा)

Presiding Deity : Indra and Agni

Visākhā is the sixteenth nakshatra of the lunar zodiac. Acccording to Vedas, *Visākhā* nakshatra consists of two stars. It lies to the east of *Svāti* nakshatra. In the Vedic age it consisted of two stars viz., 1 and 2 *Tulasya,* and the *yogatārā* was 1 *Tulasya* (*Saumya Kilaka*). But according to modern astronomers it consists of the same five stars of the Tulā Mandala forming a *torana* (arch) (*b*) The month name *Vaisākha* is derived from Visākhā nakshatra as the full moon of the month occurs at Visākhā nakshatra. The old name of Visākhā nakshatra is *Rādhā*. Another name of the month of Vaisākha is *Rādha*.

4. SĀRDULA MANDALA (Lupus)

(शार्दूल मण्डल)

Sārdula Mandala lies to the south of Tulā Mandala. The stars 1, 2, 3 and 4 *Sārdulasya* form the body of Sārdula Mandala and 5, 6, 7 and 8 are in the shape of the tail of Sārdula Mandala. The old *Vyāghra* nakshatra lies in this Mandala.

THE OLD NAKSHATRA VYĀGHRA (VRIK)

(प्राचीन व्याघ्र नक्षत्र—वृक नक्षत्र)

The old *Vyāghra* nakshatra perhaps consisted of the stars 1,2, 3 and 4 *Sārdulasya*. In the Atharva Veda, it is stated that one who is born in Vyāghra nakshatra becomes a good warrior but kills his parents (vide A. V., 6-110-3).

5. MAHISHĀSURA MANDALA (Centaurus)

(महिषासुर मण्डल)

Mahishāsura Mandala lies to the south of Sārdula Mandala. In the month of Vaisākha, an observer at Calcutta may find during midnight at the southern point two brilliant stars.

(*a*) राधा विशाखा पुष्पे तु ।। इति अमरकोषः ।
(*b*) तोरणाकृतिनि पञ्चतारके ॥ इति कालिदासः ।

These two stars are first and second stars of Mahishāsura Mandala. 1 *Mahishāsurasya* (= α Centauri) is the 3rd brilliant star and 2 *Mahishāsurasya* (= β Centauri) is the 10th brilliant star of *Bhagola* (celestial sphere). The two stars lie at a distance of 3 cubits from each other in the east-west direction. The star 1 *Mahishāsurasya* (= α Centauri) is the nearest star to the earth.

6. VRITTA MANDALA (Circinus)

(वृत्त मण्डल)

7. DHUMRĀT MANDALA (Apus)

(धुम्राट् मण्डल)

... (Serpens)

(सर्प मण्डल)

Mahāsarpa stands at the south of Uttara Kirita Mandala. ...a Kirita is seen placed on the hood of Mahāsarpa.

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These two stars are first and second stars of Mahishāsura Mandala. 1 *Mahishāsurasya* (= α Centauri) is the 3rd brilliant star and 2 *Mahishāsurasya* (= β Centauri) is the 10th brilliant star of *Bhagola* (celestial sphere). The two stars lie at a distance of 3 cubits from each other in the east-west direction. The star 1 *Mahishāsurasya* (= α Centauri) is the nearest star to the earth.

6. VRITTA MANDALA (Circinus)
(वृत्त मण्डल)

7. DHUMRĀT MANDALA (Apus)
(धुम्राट् मण्डल)

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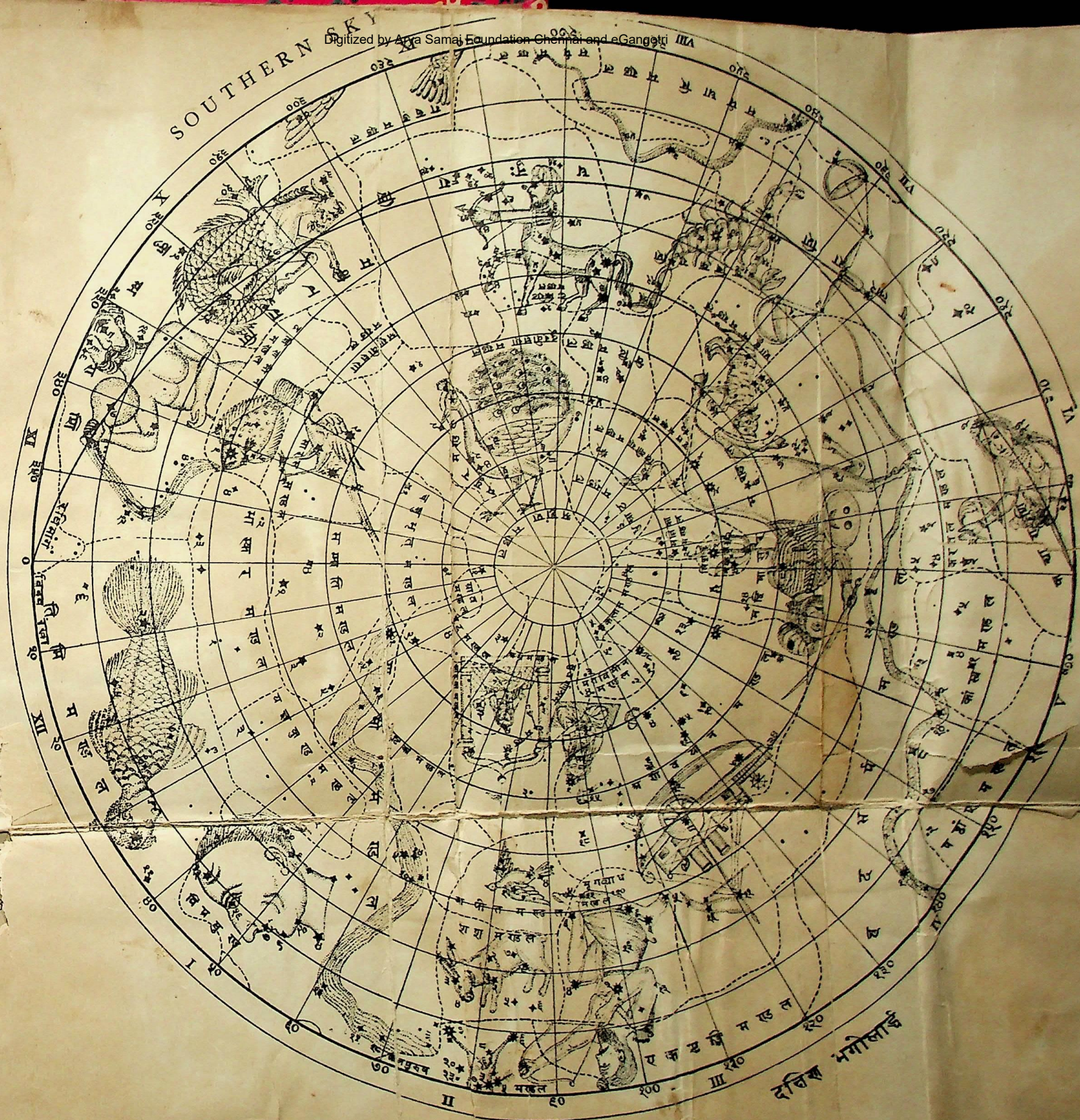
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VITHI VIII

The eighth *Vithi* consists of the following constellations:

1. Harikulesa Mandala (हरिकुलेश मण्डल)
2. Uttara Kirita Mandala (उत्तर किरीट मण्डल)
3. Sarpa Mandala (सर्प मण्डल)
4. Vrischika Mandala (वृश्चिक मण्डल)
5. Dakshina Trikona Mandala (दक्षिण त्रिकोण मण्डल)
6. Mānadanda Mandala (मानदण्ड मण्डल)

1. HARIKULESA MANDALA (Hercules)

(हरिकुलेश मण्डल)

To the western part of the star Nilamani and to the east of Bhutesa Mandala lies the Harikulesa Mandala. The stars of this Mandala form the figure of three lotuses. The inner part of the lotus consists of the stars 8, 1, 2, 7 and 15 *Harikulesasya.* The middle part is formed by the stars 12,5 and 9 *Harikulesasya* and the outer part consists of the stars 4, 16, 3 and 12 *H ikulesasya.* The solar system with its family of planets ves towards the star 12 *Harikulesasya.* The motion of the n per *Vipala* (0.4 sec.) is 6 miles. The star 2 *Harikulesasya* considered to be the best binary of the Universe. The le star of 2 *Harikulesasya* completes the revolution about er in 35 years.

TTARA KIRITA MANDALA (Corona-Borealis)

(उत्तर किरीट मण्डल)

ra Kirita Mandala lies between Harikulesa and Bhutesa as. The stars of this constellation form the figure of a e in the sky. This necklace-shaped constellation is seen north-east side of the star *Nishthya.*

3. SARPA MANDALA (Serpens)

(सर्प मण्डल)

Iahāsarpa stands at the south of Uttara Kirita Mandala. a Kirita is seen placed on the hood of Mahāsarpa.

4. VRISCHIKA MANDALA (Scorpius)

(वृश्चिक मण्डल)

Presiding Deity : The planet Mars (मंगल ग्रह)

Vrischika is the eighth *rāsi* of the solar zodiac. It comes to the meridian at midnight of the month of Jyaistha. The shape of this constellation looks very beautiful and attractive among the constellations. The observer can easily identify this constellation which forms the figure of a scorpion. Vrischika Mandala consists of three nakshatras, viz., Anurādhā, Jyesthā and Mulā.

THE NAKSHATRA ANURĀDHĀ

(अनुराधा नक्षत्र)

Presiding Deity : Mitra (मित्र)

Anurādhā is the seventeenth nakshatra of the lunar zodiac. The nakshatra consists of four stars which form the figure of a serpent(*a*). Anurādhā nakshatra lies at a distance of 8 cubits south-east of *Visākhā* nakshatra. To the east of Visākhā nakshatra, the four stars 8, 5, 11 and 18 *Vrischikasya* lie at the face of Vrischika. These four stars which form the figure of a serpent constitute the *Anurādhā* nakshatra. The name o[f] this nakshatra is Anurādhā as it follows the Rādhā nakshatra. 5 *Vrischikasya* ($=\delta$ Scorpii) is the brightest among these f[our] stars and is also the *yogatārā* of Anurādhā nakshatra.

THE NAKSHATRA JYESTHĀ

(ज्येष्ठा नक्षत्र)

Presiding Deity : Indra (Jyestha)

(इन्द्र वा ज्येष्ठ)

Jyesthā is the eighteenth nakshatra of the lunar z[odiac]. Jyesthā nakshatra is formed by three stars looking like [the] tooth of a boar(*b*). The nakshatra lies about 5 cubits sou[th]

(*a*) सर्पाकृति सप्ततारामयं। इति कालिदासः।
वलिनिभताराचतुष्टयात्मकं। इति दीपिका टीका।

(*b*) शूकरदन्ताकृतितारकत्रितयात्मिका। इति कालिदासः।
वलयाकृति। इति दीपिका।

east of Anurādhā nakshatra. Jyesthā nakshatra consists of three stars, viz., 1, 9, and 10 *Vrischikasya* lying in the neck of Vrischika and forming the figure of a bird.

The middle star of this group is of reddish colour. It is a first magnitude star and is 17th in order of brilliance. Jyesthā nakshatra has derived its name from *Indra* whose name is Jyestha. 1 *Vrischikasya* or Rohini tārā (Antares = α Scorpii) is the *yogatārā*, i.e. the principal star of Jyesthā. The month name Jyaistha is derived from the full moon occurring at or near the nakshatra Jyeshthā. The name *Jyesthāgni* of this nakshatra is also found in the Atharva Veda. It is stated in astrology that if any native (*Jātaka*) is born during Moon's stay in this nakshatra, it does harm to the elder brothers.

THE NAKSHATRA MULĀ

(मूला नक्षत्र)

Presiding Deity : *Nirriti* (*Yama* or *Rākshasesvara*)

Mulā is the nineteenth nakshatra of the lunar zodiac. It consists of five stars shaped like a conch shell. *Mulā* nakshatra lies about 8 cubits to the south-east of Jyesthā nakshatra. The present name of this nakshatra is *Mulā* and its old name is *Vichrita*. Mulā nakshatra is formed by the five stars situated at the tail of Vrischika and the figure looks like the letter 'ba' (ব) of the Bengali script(*a*).

This asterism consists of the five stars 2, 7, 3, 14 and 9 *Vrischikasya* and represent the figure of a conch shell. *Vichrita* nakshatra was supposed to consist of the two stars 2 and 7 *Vrischikasya* lying at the mouth of the conch shell. According to the Atharva Veda (vide A.V., 6-110-2) the native (*Jātaka*) born in the Vichrita nakshatra destroys his family. And for this reason the name *Mulavarhani* is assigned to Vichrita nakshatra in Taittiriya Brāhmana (vide T.B. 1-4-2-8).

According to Rig Veda (vide R.V. 10-14-10) the stars 2

(*a*) सिंहपुच्छाकारः। इति मुहूर्त्तचिन्तामणि।
मौलिभाजि नवतारकाङ्किते मूलभे सुतनुशङ्कमूर्त्तिनि। इति कालिदासः।

Vrischikasya (*Syām tārā*) and 7 *Vrischikasya* (*Sabal tārā*) are considered to represent the two messengers of Yama. These two stars lie at the door of the *Yamapatha* or *Chhāyāpatha*. Syām tārā is the yogatārā of Mulā nakshatra.

5. DAKSHINA TRIKONA MANDALA

(Triangulum Australis)

(दक्षिण त्रिकोण मण्डल)

6. MĀNADANDA MANDALA (Norma)

(मानदण्ड मण्डल)

VITHI IX

Vithi IX consists of the following constellations :

1. Takshaka Mandala (तक्षक मण्डल)
2. Vinā Mandala (वीणा मण्डल)
3. Sarpadhāri Mandala (सर्पधारी मण्डल)
4. Dhanus Mandala (धनुः मण्डल)
5. Dakshina Kirita Mandala (दक्षिण किरीट मण्डल)
6. Duravikshana Mandala (दुरवीक्षण मण्डल)
7. Vedi Mandala (वेदी मण्डल)

1. TAKSHAKA MANDALA (Draco)

(तक्षक मण्डल)

Takshaka Mandala lies between Sisumāra and Saptarshi Mandalas. Sisumāra is surrounded by Takshaka Mandala. The star 1 *Takshakasya* (Sparsamani tārā = γ Draconis) in the north-west direction of the star Nilamani lies 10 cubits away from it. 12 *Takshakasya* lying at the tail of Takshaka Mandala is very close to the Dhruvatārā. At the beginning of Kaliyuga the star 7 *Takshakasya* was the Dhruvatārā. It lies at the middle of 3 *Sisumārasya* (Indra) and 4 *Saptarshih* (Vasishtha). The *Kadamba Bindu* between the two stars *Dhruva* and 1 *Takshakasya* is situated in the coil of Takshaka Mandala.

2. VINĀ MANDALA (Lyra)

(वीणा मण्डल)

This constellation lies to the east of Harikulesa Mandala and west of *Chhāyāpatha*. 1 *Vināyāh* (Nilamani tārā or Vega = α Lyrae) is the principal star of this Mandala and is the 4th bright star of the sky.

A unique parallelogram is formed by the four stars 2, 3, 5 and 6 *Vināyāh*. The old nakshatra *Abhijit* is situated in the Vinā Mandala (*a*).

(*a*) तारकात्रयात्मकश्टङ्गाटकाकृति ।। इति ज्योतिषम् ।

THE OLD NAKSHATRA ABHIJIT

(प्राचीन अभिजित् नक्षत्र)

The old nakshatra *Abhijit* consists of three stars viz., 1, 4 and 5 *Vināyāh*. The stars form the figure of the water chestnut (*Sringātaka* or *Pāniphala*). *Nilamani* is the yogatārā of this asterism. This asterism is situated very distant north of the lunar zodiac.

3. SARPADHĀRI MANDALA (Ophiuchus)

(सर्पधारी मण्डल)

This constellation lies to the south of Harikulesa Mandala.

4. DHANUS MANDALA (Sagittarius) (*a*)

(धनुः मण्डल)

Presiding Deity : The planet Jupiter (बृहस्पति ग्रह)

Dhanuh is the ninth *rāsi* of the solar zodiac. Dhanus is situated north-east of Mulā nakshatra and lies to the western side of *Chhāyāpatha*. In this Mandala there are no bright stars of first or second magnitude. As such it is a rāsi indicating night. The constellation consists of two nakshatras of the lunar zodiac viz., Purva Āsādhā and Uttara Āsādhā.

THE NAKSHATRA PURVA ĀSĀDHĀ. (*b*)

(पूर्व आषाढ़ा नक्षत्र)

Presiding Deity : Āpas (आप:)

Purva Āsādhā is the twentieth nakshatra of the lunar zodiac. It consists of 4 stars and looks like a bedstead. Purva Āsādhā

(*a*) पूर्व्वार्द्धमनुष्याकार शेषार्द्धश्वाकार धनुर्द्धारी पुरुषः ॥ इति जातकचन्द्रिका ।
धनुस्तरङ्गजघनी दीप्यमानो धनुर्द्धरः ।
....
मृगास्यो मकरो ब्रह्मण् वृषस्कन्धः फणाङ्गद्ः
मकरोऽसौ नदीचारि वसते च महोदधौ ।
रिक्त कुम्भश्च पुरुषः स्कन्धधारी जलाप्लुताः
द्यूतशालाचरः कुम्भः स्थायी शौण्डिकसद्मसु ॥ इति वामन पुराण । ५ ।

(*b*) सूर्पाकृति चतुस्तारकात्मिका । इति ज्योतिषं ॥
गजदन्ताकृति द्वितारकात्मिका । इति ज्योतिषं ॥
सूर्पमर्त्तिनि शिरोगते चतुस्तारके करिकरोरुवारिभे । इति कालिदासः ॥

nakshatra lies 10 cubits east of Mulā nakshatra. It is situated to the north-east of the conch shaped Mulā nakshatra and near the eastern bank of *Ākāsa Gangā* or the Milky Way. The nakshatra consists of the stars 1, 6, 5 and 3 *Dhanushah.* The stars form a rectangular area. The name of the nakshatra has been assigned as Āsādhā as the asterism looks like a brick. The two stars of the northern side lie in the *Chhāyāpatha* or Milky Way. The star 3 *Dhanushah* which lies in the extreme north is the yogatārā of this nakshatra. It is known by the name *Tulasi.* The month-name *Āsādha* is derived from the full-moon occurring at or near the *Purva Āsādhā* nakshatra.

THE NAKSHATRA UTTARA ĀSĀDHĀ (*a*)

(उत्तर आषाढ़ा नक्षत्र)

Presiding Deity : *Visvadevāh* (विश्वदेवाः)

Uttara Asādhā is the twenty-first nakshatra of the lunar zodiac. It lies 10 cubits away to the north-east direction of Purva Āsādhā nakshatra. It consists of the four stars 11, 4, 9 and 2 *Dhanushah* and forms the shape of a winnowing basket. In some opinion it consists of the stars 4, 2 and 8 *Dhanushah* looking like the tooth of a boar. The star 2 *Dhanushah* is the *yogatārā* of this asterism. The star may be called *Lankā.*

5. DAKSHINA KIRITA MANDALA (Corona Australis)

(दक्षिण किरीट मण्डल)

6. DURAVIKSHANA MANDALA (Telescopium)

(दुरवीक्षण मण्डल)

7. VEDI MANDALA (Ara)

(वेदी मण्डल)

(*a*) सूर्पाकृति ताराचतुष्टयात्मकं ।
इति कालिदासः ॥
गजदन्तवत् अष्टतारामयं ।
इति दीपिका ठीका ॥
'आपाढ इष्ठकं' इति सायणाचार्य्यः शतपथब्राह्मण । ६ । ३।२।२।

VITHI X

The tenth *Vithi* has ten constellations :

1. Hamsa Mandala (हंस मण्डल)
2. Srigāla Mandala (श्रृगाल मण्डल)
3. Vāna Mandala (वाण मण्डल)
4. Garuda Mandala (गरुड़ मण्डल)
5. Sravisthā Mandala (श्रविष्ठा मण्डल)
6. Makara Mandala (मकर मण्डल)
7. Anuvikshana Mandala (अनुवीक्षण मण्डल)
8. Sindhu Mandala (सिन्धु मण्डल)
9. Mayura Mandala (मयूर मण्डल)
10. Ashtāmsa Mandala (अष्टांश मण्डल)

1. HAMSA MANDALA (Cygnus)

(हंस मण्डल)

Tārā-Hamsa lies to the east of Vinā Mandala. Hamsa is floating in the Ākāsa Gaṅgā in the south-east direction. The star 1 *Hamsasya* is situated at the tail of Tārā-Hamsa and is known as *Puchcha tārā* (α Cygni). The stars 3, 2 and 5 *Hamsasya* mark two wings of the Swan or Cygnus and 4 *Hamsasya* lies at the mouth of Tārā-Hamsa and is known as Hamsamukha tārā. The star Hamsa-mukha can be seen if the line joining the two stars Nilamani and 2 *Vināyāh* is extended towards the south-east direction. The observer can identify the *Puchcha tārā* if the joining line between the stars Pulaha and Dharmatārā is extended. According to Mahābhārata the seven *Risis* (sages) took the form of a Swan.

(Vide, Mahābhārata, 6/120/96-97)

2. SRIGĀLA MANDALA (Vulpecula)

(शृगाल मण्डल)

To the south of Hamsa Mandala lies the Srigāla Mandala. The story of attainment of heaven of the Srigāla (Jackal), the

Minister of Sārdularāja, has been narrated in the Mahābhārata(*a*). But the position of the *Srigāla* is not mentioned.

3. VĀNA MANDALA (Sagitta)
(वाण मण्डल)

Vāna Mandala lies in the *Somadhārā* to the south of Srigāla Mandala. It has been narrated in the Mahābhārata that the arrow thrown by Arjuna raised the nectar water of Bhogavati.

4. GARUDA MANDALA (Aquila)
(गरुड़ मण्डल)

This Mandala lies in the *Somadhārā* to the south of Vāna Mandala. Garuda stole nectar (*amrita*) for the *Nāgas* as ransom for the deliverance of his mother from slavery, as narrated in the Mahābhārata (*b*). This legend is represented in the sky. At the time of taking away the *Amrita* (nectar), Krisānu Deva, the keeper of the *Amrita*, pierced Garuda by an arrow(*c*). The nakshatra *Sravanā* looking like an arrow lies in the Garuda Mandala.

THE NAKSHATRA SRAVANĀ (*d*)
(श्रवणा नक्षत्र)

Presiding Deity : *Garuda-vāhana Vishnu*

Sravanā is the twenty-second nakshatra of the lunar zodiac. The nakshatra lies about 20 cubits north-east of *Uttarāsādhā* nakshatra. Sravanā nakshatra consists of the stars 8, 1 and 2 *Garudasya* and these three stars form the shape of an arrow. This *Tārā-shara* is situated to the east of *Somadhārā* and opposite to *Nilamani*. The star 1 *Garudasya* (Altair = α Aquilae) is the 11th brightest star of the sky. It is of yellowish colour. The star is also known as *Vāsudeva* and it is the *yogatārā* of Sravanā nakshatra. The month-name Srāvana is derived from the full-moon occurring at or near the Sravanā nakshatra. This asterism is situated very distant north of the lunar zodiac.

(*a*) Vide, Mahābhārata, 12/3.
(*b*) Vide, Mahābhārata 1. 33. 10.
(*c*) Vide, R.V. 4. 27. 3 ; 1.112. 21.
(*d*) तारकात्रयमिते शराकृतौ । इति कालिदासः ।

5. SRAVISTHĀ MANDALA (Delphinus)

(श्रविष्ठा मण्डल)

Sravisthā Mandala lies to the east of Garuda Mandala and on the eastern side of *Chhāyāpatha* (Milky Way). This mandala consists of *Dhanisthā* nakshatra.

THE NAKSHATRA DHANISHTHĀ (*a*)

(धनिष्ठा नक्षत्र)

Presiding Deity : *The Vasus*

Dhanisthā is the twenty-third nakshatra of the lunar zodiac. This nakshatra consists of five stars *viz.*, 1, 2, 3, 5 and 6 *Sravishthasya* forming the shape of a *Mridanga* (a kind of drum). Dhanisthā lies about 7 cubits to the east of Sravanā nakshatra. The name *Dhanisthā* has been assigned to it from the sound of the drum. 1 *Sravisthasya* (β Delphini) is the principal star of this nakshatra. This asterism is situated very distant north of the lunar zodiac.

6. MAKARA MANDALA (Capricornus)

(मकर मण्डल)

Makara is the tenth *rāsi* of the solar zodiac. The front part of Makara resembles a deer and the rear part a fish. Makara is facing to the west. There are no bright stars of first or second magnitude in this Mandala and as such it is known as a *rāsi* indicating night. If the line joining the two stars *Nilamani* and *Vāsudeva* is extended to the north-east direction, it intersects the Makara Mandala. The small stars 7, 8 and 9 *Makarasya* lying to the east of *Uttarāsādhā* nakshastra form a small isosceles triangle. The top of this triangle is in the southern side. This triangle is the head of Makara. A double star of yellowish colour and of fourth magnitude in brilliancy lies about one foot north of the triangle and another double star is situated to its north. These two double stars form the two horns of Makara. The tail of Makara (*Makara puchcha*)

(*a*) मस्तकोपरि समागते धने मण्डलाकृतिनि पञ्चतारके। इति कालिदासः।

consisting of many stars form a triangle and lies to the north of the head of Makara (*Makara munda*).

The stars of this Mandala are very small and as such they have not been taken into account to constitute any nakshatra of this Mandala.

The Makara Mandala consists of two nakshatras *Sravanā* and *Dhanisthā* lying very distant and the nakshatras are known from the two small clusters of stars. Makarāsura stole away the Vedas from Brahmā by influencing him and fled to the deep ocean. Thereafter Vishnu taking the image of a fish recovered the Vedas from the vast ocean (*a*).

7. ANUVIKSHANA MANDALA (Microscopium)

(अणुवीक्षण मण्डल)

Anuvikshana Mandala lies to the south of Makara Mandala.

8. SINDHU MANDALA (Indus)

(सिन्धु मण्डल)

Sindhu Mandala lies to the south of Anuvikshana Mandala.

9. MAYURA MANDALA (Pavo)

(मयूर मण्डल)

Mayura Mandala lies to the south of Sindhu Mandala. According to Vālmiki, Maharsi Visvāmitra while creating the southern hemisphere also created a duplicate *Saptarshi* Mandala (Vide, Rāmāyana, 1.60.21). It is believed that the *Saptarshis* resembling Chitrasikhandi in the Devabhāga inhabited in the Mayura Mandala.

10. ASHTĀMSA MANDALA (Octans)

(अष्टांश मण्डल)

Astāmsa Mandala comprises of a few stars having brilliance of the sixth order. The star 2 *Ashtāmsasya* is very close to the *Yāmya-Dhruva* (Southern Pole star) and is taken as the Yāmya-Dhruva of the present time.

(*a*) Vide, Padma Purāna, 5. 92.

VITHI XI

Vithi XI consists of the following constellations :

1. Sephāli Mandala (शेफालि मण्डल)
2. Godhā Mandala (गोधा मण्डल)
3. Pakshirāja Mandala (पक्षिराज मण्डल)
4. Asvatara Mandala (अश्वतर मण्डल)
5. Kumbha Mandala (कुम्भ मण्डल)
6. Dakshina Mina Mandala (दक्षिण मीन मण्डल)
7. Sārasa Mandala (सारस मण्डल)
8. Chanchuvrit Mandala (चञ्चुभृत् मण्डल)

1. SEPHĀLI MANDALA (Cepheus)

(शेफालि मण्डल)

No stars of the first or second magnitude in brilliance lie in this Mandala. Sephāli Mandala stands to the north-east of Hamsa Mandala and the constellation stretches from the confines of Hamsa Mandala to those of Sisumāra Mandala. The line passing through the first and second stars of this Mandala nearly touches the *Saumya Dhruvatārā* (North Pole Star) if extended in the northern direction. Sephāli Mandala occupies a part of *Chhāyāpatha* (Milky Way).

2. GODHĀ MANDALA (Lacerta)

(गोधा मण्डल)

Godhā Mandala stands to the south of Sephāli Mandala.

3. PAKSHIRĀJA MANDALA (Pegasus)

(पक्षिराज मण्डल)

It can be observed that the four stars lying far east of Sravisthā Mandala form a square of equal sides. These four stars represent the four hoofs of Pakshirāja. A bright star can be seen to the south-west of this square which is known as 2 *Pakshirājasya* (Markab $= \alpha$ Pegasi). About 10 cubits to the west

south-west of this star lies another brilliant star 1 *Pakshirājasya.* The star is situated at the head of Pakshirāja Mandala.

Pakshirāja Mandala consists of two nakshatras *viz.*, (1) *Purvabhādrapada nakshatra* and (2) *Uttarabhādrapada nakshatra.*

THE NAKSHATRA PURVABHĀDRAPADA OR PRAUSTHAPADA (*a*)

(पूर्वभाद्रपद नक्षत्र वा प्रौष्ठपद नक्षत्र)

Presiding Deity : Aja Ekapād (अज एकपाद्)

Purvabhādrapada is the twenty-fifth nakshatra of the lunar zodiac. The nakshatra lies to the far east of *Dhanisthā* nakshatra. Purvabhādrapada consists of two stars shaping like a bell. The two stars are situated to the west of the square-size area. Among the two stars the northern one is 3 *Pakshirājasya* (β Pegasi) and is the *yogatārā* of Purvabhādrapada nakshatra. The month-name *Bhādra* is derived from the full moon occurring at or near Purvabhādrapada nakshatra.

THE NAKSHATRA UTTARABHĀDRAPADA

(उत्तरभाद्रपद नक्षत्र)

Presiding Deity : Ahir-budhnah (अहिर्बुध्नः)

Uttarabhādrapada is the twenty-sixth nakshatra of the lunar zodiac. It comprises two stars looking like a bell. Uttarabhādrapada lies about 8 cubits to the east of Purvabhādrapada nakshatra. This asterism is formed by the two stars lying to the east of the parallelogram area of Pakshirāja Mandala. Among these two stars, the northern one is known as 1 *Dhruvamātuh* and the southern one as 4 *Pakshirājasya.* 1 *Dhruvamātuh* (γ Pegasi) is the *yogatārā* of Uttarabhādrapada nakshatra.

4. ASVATARA MANDALA (Equuleus)

(अश्वतर मण्डल)

This Mandala lies to the south-west of Pakshirāja Mandala.

(*a*) मारमूर्तिभृतिकोपरिस्थिते पूर्व्वभाद्रपदमे द्वितारके । इति कालिदासः ।

5. KUMBHA MANDALA (Aquarius)

(कुम्भ मण्डल)

Presiding Deity : *Gridhra Vāhana Sani* (Saturn)

Kumbha is the eleventh *rāsi* of the solar zodiac. Kumbha Mandala lies to the south of Pakshirāja Mandala. In this Mandala there are no bright stars of the first, second or third magnitude and as such it is known as a rāsi indicating night. *Satatāraka* nakshatra is situated in this Mandala.

THE NAKSHATRA SATATĀRAKA or SATABHISHĀ (*a*)

(शततारक नक्षत्र वा शतभिषा नक्षत्र)

Presiding Deity : *Indra* (इन्द्र)

Satatāraka is the twenty-fourth nakshatra of the lunar zodiac. Satabhishā nakshatra consists of hundred very small stars arranging themselves in the form of a circle. This asterism lies very distant south of Purvabhādrapada nakshatra. The star at the middle of these hundred stars is known as 7 *Kumbhasya* (λ Aquarii) and is also the *yogatārā* of this nakshatra. During the Moon's stay in this nakshatra, if anybody is attacked with fever, it is thought that even hundred physicians cannot cure the patient. Presumably for this reason the other name of this nakshatra is *Satabhishā*.

6. DAKSHINA MINA MANDALA (Pisces Australis)

or

MAHĀMINA MANDALA

(दक्षिणमीन मण्डल वा महामीन मण्डल)

The Mahāmina Mandala stands to the south of Kumbha rāsi and south-east of Makara rāsi. The principal star of this Mandala is 1 *Dakshinaminasya* or *Matsyamukha* (Fomalhaut = α Piscis Austrini). It occupies the face of the *Mahāmina*. It is a very brilliant star and prominent among the group of the second magnitude stars. The observer can identify *Matsyamukha* by extending the line passing through the two

(*a*) मण्डलाभशततारकाकुलैः । इति कालिदासः ।

stars of the Purvabhādrapada nakshatra to the south. It will be observed that the star *Matsyamukha* is placed at the face of the moon-fish pointing to the east.

7. SĀRASA MANDALA (Grus)

(सारस मण्डल)

Sārasa Mandala lies to the south of Dakshinamina Mandala.

8. CHANCHUVRIT MANDALA (Toucan)

(चञ्चुभृत् मण्डल)

Chanchuvrit Mandala lies to the south of Sārasa Mandala.

VITHI XII

Vithi XII comprises the following constellations :

1. Kāsyapiya Mandala (काश्यपीय मण्डल)
2. Dhruvamātā Mandala (ध्रुवमाता मण्डल)
3. Mina Mandala (मीन मण्डल)
4. Bhāskara Mandala (भास्कर मण्डल)
5. Sampāti Mandala (सम्पाति मण्डल)
6. Hrada Mandala (ह्रद मण्डल)
7. Grāba Mandala (ग्राव मण्डल)

1. KĀSYAPIYA MANDALA (Cassiopeia) [a]

(काश्यपीय मण्डल)

This Mandala stands at the top of the twelfth Vithi and passes through the streams of *Ākāsa Gangā* (Milky Way.) It is mentioned in the Vishnu Purāna that the matted hair of *Saptarshis* (seven sages) is floating in the streams of Ākāsa Gangā (*b*). The sages like Marichi etc. of the Saptarshis of *Svāyambhuba Manvantara* lie far away from Ākāsa Gangā. But it is thought that sages like Kasyapa etc. of *Vaivasvat Manvantara* remain in this Mandala. For this reason it is known as Kāsyapiya Mandala.

The constellation is very close to *Dhruvatārā*. It is believed that Suniti, the mother of Dhruva, lies in this Mandala (*c*). The five principal stars of this Mandala are so placed that in the sky they look like the figure 'W' of the English script. For this reason this Mandala has been stated in the Rig Veda as the chariot of Trisanku (*d*).

(*a*) सप्तमे वैवस्वतमन्वन्तरे
कश्यपोऽत्रिर्वशिष्ठश्च विश्वामित्रोऽथ गोतमः
जमदग्निर्भरद्वाज एते सप्तर्षयः स्मृताः ॥ इति श्रीभागवतम् ।

(*b*) Vide, Vishnu Purāna, 2. 8.

(*c*) Among the two names of this Mandala, we have assigned the name Dhruvamātā (Suniti) to the Mandala lying to the south of Kāsyapiya Mandala.

(*d*) Vide, R. V. 9. 62. 17.

In the year 1772 A.D. a new bright star was observed in this Mandala. The famous astronomer Tycho Brahe has given a detailed description of this new star. This star was brilliant like the planet Venus and was visible even during the day time.

2. DHRUVAMĀTĀ MANDALA (Andromeda)

(ध्रुवमाता मण्डल)

The name of any Mandala lying to the south of Kāsyapiya Mandala is not found in our Sāstras. It is likely that some part of this Mandala remains in Mina Mandala and other part in Pakshirāja Mandala. However the assignment of any name to this Mandala is necessary. From this viewpoint we have given the name *Dhruvamātā* to this Mandala. The main star of this Mandala 1 *Dhruvamātuh* (Pratisthā tārā) lies in Pakshirāja Mandala. It is the *yogatārā* of *Uttara-Bhādrapada* nakshatra. The star 2 *Dhruvamātuh* is included in Mina Mandala and situated at the tail of *Revati*.

3. MINA MANDALA (Pisces)

(मीन मण्डल)

Presiding Deity : The planet 'Jupiter' (बृहस्पति ग्रह)

Mina is the twelfth rāsi of the solar zodiac. There are no bright stars of the first, second or third magnitude in this Mandala. Mina Mandala has derived its name from the appearance of the *Revati* nakshatra looking like a fish. The Mandala contains *Revati* nakshatra. At the head of Mina Mandala there is a nebula known as M 32.

THE NAKSHATRA REVATI

(रेवती नक्षत्र)

Presiding Deity : Pushā (पूषा)

Revati is the twenty-seventh nakshatra of the lunar zodiac. It contains 32 stars forming the shape of a fish. It lies 4 cubits to the east of Uttara-Bhādrapada nakshatra. The figure of the fish of Revati is facing to the west lying in the northern

direction. The tail of the fish is composed of the stars 6, 4 and 5 *Minasya.* The three stars form the shape of a bow. The easternmost star is 6 *Minasya* (*Mulakilaka tārā*). The head of the fish is formed by the three stars 7, 5 and 14 *Dhruvamātuh.* The stars 2 *Dhruvamātuh* and 8 *Minasya* lie at the back of Revati. The stars 9, 4, 10 and 12 *Dhruvamātuh* constitute the belly of Revati nakshatra. 6 *Minasya* (ζ Piscium) is the *yogatārā* of this asterism which lies at the tail of Revati.

4. BHĀSKARA MANDALA (Sculptor)

(भास्कर मण्डल)

This Mandala lies to the south of Mina Mandala.

5. SAMPĀTI MANDALA (Phoenix)

(सम्पाति मण्डल)

Sampāti Mandala stands to the south of Bhāskara Mandala.

6. HRADA MANDALA (Hydrus)

(ह्रद मण्डल)

Hrada Mandala is lying to the south of Sampāti Mandala.

7. GRĀBA MANDALA (Nebecula Minor)

(ग्राब मण्डल)

Grāba Mandala is lying to the south of Hrada Mandala.

INDEX

A

B

T

U

V

W

Y

Z